

the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

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Editorial Comment

Farm Women Use Cosmetics

A survey covering the use of cosmetics by farm women and girls has dissipated the old concept, common to city dwellers, that they do not represent a good market for these products.

The interviewing staff called personally on a representative cross-section of 207 Iowa farm women to determine their purchases of beauty aids. The women interviewed in this survey were selected according to their economic status in order to obtain a reliable cross-section sample.

The survey, taken by Wallaces' Farmer Iowa Homestead, showed that 75 per cent of the farm women and girls of Iowa use permanent waves, from 50 to 75 per cent use lipstick and more than 82 per cent use hand lotions.

FTC Denies Fitch Motion

On September 8, the Federal Trade Commission denied a motion made by attorneys of the F. W. Fitch Co. to recall its complaint against the company for using allegedly misleading advertising.

The company had requested that the Commission order a general study of the shampoo and scalp preparation industry to determine the extent to which practices indulged in by the Fitch company were common to the industry; or, to issue complaints against all shampoo and scalp preparation manufacturers, who were committing acts similar to those used by the company, and to consolidate such proceedings for hearing.

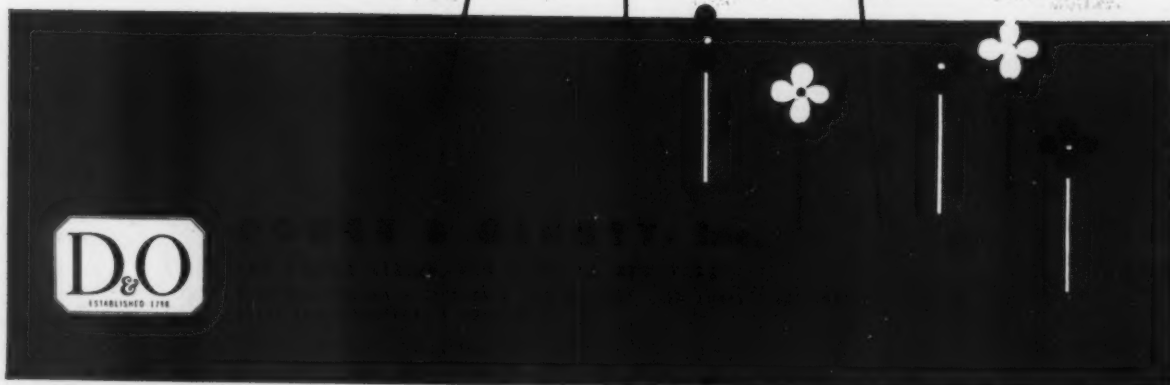
Ruling on Contested Excise Taxes

Previous to a new ruling, appearing in the Internal Revenue Bulletin of Aug. 11, 1947, containing General Counsel's Memorandum 25298, and a new Income Tax Ruling 3863, liabilities on contested excise taxes were for the years in which the sales actually were made. With the new ruling, unpaid amounts, subject to bona fide contest, may be paid in the year in which a settlement is reached.

WORK OF ART BY D & O



*Whatever your need...you
are certain to find a
better D & O perfume base*



Desiderata

by MAISON G. DENAVARRE



M. G. DeNavarre at work in his laboratory

LECITHIN & MOLD

In experimenting with a dispersion of oil-free lecithin in water, recently, it was found that the dispersions must be preserved or they will support a luxuriant growth of mold, green and black types were most noticeable.

It is well known in the carbonated beverage industry for example, that sugars having a high ash, nitrogen and dextrin content will produce growth in the beverage a short time after it is bottled. Perhaps there is a parallel in the two cases. In any event, it is possible that the presence of lecithin in a cosmetic may make it more susceptible to mold growth or other spoilage; the product should therefore be all the more protected.

CETYL ALCOHOL

It appears the war is over, for the condition that prevailed then with cetyl alcohol—and absent during the war—is again manifest. Cetyl alcohol is a bit easier to get. The good stuff still commands the price. It has to. Figure it out for yourself. There are two ways to make cetyl alcohol. One is by the saponification of spermaceti. Well, spermaceti costs around 50 cents a pound. The best you can possibly get is a 50 per cent yield, which would place a *raw material* cost on the cetyl alcohol of about 1.00 per pound. There is of course a processing . . . someone has to pay for it. In addition, most processes of this type have less than the theoretical yield. Well then, how can the *saponification* (of spermaceti) type of cetyl alcohol sell for 50 or 60 cents a pound

Some might say that it might be possible to get cheaper spermaceti. This is doubtful, because that situa-

tion is quite static. Spermaceti comes from the sperm whale and I am told that there is but one boat (with American flag) that is on the water fishing for sperm whale. (Boats of most other nationals don't fish for sperm whale, but go after other varieties.)

So, if you think you are getting *pure* cetyl alcohol at fifty or sixty cents a pound—that is, cetyl alcohol made from spermaceti, just look up the price of spermaceti on the market and you can do your own figuring. For further assurance, get the melting point, acetyl value, saponification and acid value, and that will explain a lot.

IONIC DEODORIZERS

One cationic—yes and one anionic—compound have recently come to the fore as deodorizers. The two possess bactericidal properties. That would explain part of the result obtained. For if bacteria can be prevented from either growing or multiplying, the development of odorous by-products is inhibited. Yet both the cationic and anionic compound seem to possess the property of removing odors from air itself. And that odor is not due to bacteria, as in the case of cabbage or onions. Whatever it is due to will eventually be learned. Meanwhile, it is good to know that the possibility of new type air and body deodorants is not to be forgotten.

HORMONE CREAMS

There is some raising of eyebrows at the advent of the dollar hormone cream. I haven't seen any of the low priced type yet, but it must be remembered that it is quite possible to re-

duce the price of such a cream by using estrogen of the stilbesterol type in place of estrone or estradiol, particularly estrone. There is around 100 times difference in price, unit for unit, based on the assumption that both are equally as effective gram for gram. (Stilbesterol is claimed to be much more effective, although it is generally conceded it is about twice the strength of estrone.) Since the estrogen is the sole reason for the high retail cost of hormone creams, any lowering of the cost of estrogen rapidly lowers the cost of the finished product. Stilbesterol is reputed to produce much the same effect by topical application as does estrone. So there is your solution.

BOTTLE CONTENT CONTRACTION

In most cases, it is assumed that when the contents of a bottle show too much "head space" a short time after filling, that evaporation has taken place. Some evaporation no doubt has occurred. But there is also the possibility that the product may have been filled during the warm weather, then stored for shipping during the colder months.

Everyone knows that matter is expanded when warm and that it contracts when cold. So, cold is a contributing factor in the apparent shrinkage within bottles filled during warm weather. This is quite a problem in the usage of alcohol. It is no wonder that alcohol records get into a balled up condition. To my knowledge, no one weighs alcohol, but that would be the logical way to use it. A



ONLY THE *TOUGHEST* TUBE YOU CAN BUY IS GOOD ENOUGH

WHETHER it's blowing plastic bubbles or brushing teeth, youngsters have no mercy on the collapsible tubes they use! That's why the makers of BUBALOON... the new liquid plastic balloon product... specified NEW ENGLAND *Sheffield Process Tubes*.

Manufactured according to an exclusive process, these *tougher tubes* offer more protection than the product will ever need. Youngsters (and grown-ups, too) can squeeze and bend, and crush until the tube gives up its last precious portion without danger of messy leaks and waste. If you market plastic bubbles or *any* product which can be packed in a tube, call or write our nearest office. You'll get the kind of cooperation you need in a jiffy!

The
most
sensational
novelty
ever devised



NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL ST., CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVE., NEW YORK 18
T. C. SHEFFIELD, 7024 MELROSE AVE., LOS ANGELES 38 • C. W. MILLER, 151 COLE ST., SAN FRANCISCO 17
EXPORT DEPT., 500 FIFTH AVE., NEW YORK 18, CABLE "DENTIFRICE", NEW YORK

pound is a pound, hot or cold. But a hot pint is not a cool pint.

S. C. C. JOURNAL

By the time this is in print, the Society of Cosmetic Chemists membership will have received their first number of the first volume of the Journal, which will contain original addresses and contributed articles by members of the Society. Much blood and sweat went into it. It took a lot of conviction on the part of President Klarmann to put the Society in the publishing business. (The Journal contains no advertising.) A few issues will be available to non-members on a subscription basis.

ALUMINUM DRUMS

There are many times when a small drum is needed. A drum that is made of a non-ferrous metal like aluminum. So, one manufacturer is now offering 30 gallon aluminum drums. He is also investigating the possibilities of larger drums made of aluminum.

The thirty gallon aluminum drum is suitable for transporting and storing a wide variety of materials, including bulk cosmetics, and alcoholic products. The drum weighs 34 pounds compared to double this for steel drums. It is 30½ inches high and outside diameter is 18 inches not including reinforcing rings. The drum is made from deep drawn halves joined by a circumferential seam

weld. Reinforcing rings at top and bottom add strength. Top end of the drum is equipped with a bung and cap. There is also a 2 inch opening at the side.

The drum is a much wiser way of handling materials or products that would otherwise require glass.

DUST COLLECTOR

The maker of pulverizers whose machinery is most often found in face powder plants now supplants his line with a dust collector he claims is as near 100 per cent efficient as is possible. Everyone knows that dust collecting up to now has not been a particularly efficient operation, if the dust seen around the face powder department is any criterion, a dust collector that *works* is badly needed.

GLYCEROL-FORMALDEHYDE ACETAL

The possibility of making a glycerine or propylene glycol acetal of formaldehyde (mineral acid as catalyst) is a good one. The acetal so formed should be a worthwhile material for investigating antiperspirancy where this effect of formaldehyde may manifest itself under acid conditions yet the presence of the polyol will produce emollient effect. This might be the very thing that has been needed for an ideal deodorant-antiperspirant based on formaldehyde. Any polyol should work as well as glycerin.

per cent. Other cream shampoo formulas are mentioned in the March issue of THE AMERICAN PERFUMER, page 269.

666. HAIR CRAYON

Q: Please furnish me, if possible, complete information on how to make a dark brown hair crayon.

H. B.—MAINE

A: This is a bit out of our line, but offhand we would think that this could be just as easily accomplished as the manufacture of an eyebrow pencil or crayon. Since this is a job requiring special equipment and a keen knowledge of casting of sticks, it is suggested that you contact a private label house. The names of several of these go to you under separate cover.

667. HAIR STRAIGHTENER

Q: In the past few months our customers have been calling for a hair straightener and croquignole wax for colored beauty shops. We would sincerely appreciate a helping hand if you have a general formula for these two items. Any new formulas for hair tonics would also be appreciated.

J. A. D.—ALABAMA

A: A hair straightener may be made from the following formula:

	Per Cent
Castor Oil	64
Petrolatum	16
Yellow Beeswax	16
Rosin	4

Procedure: Melt the ingredients together and perfume, pouring just before the product congeals. Another way is to apply a bandoline which was generally successful in former days. A bandoline can be made from a 5 to 6 per cent solution of gum tragacanth in water, suitably preserved. Occasionally, a small amount of alkali such as borax or potassium carbonate is added. A croquignole wax is not known to us, but we would suspect it to be a colored wax to be used in conjunction with a hot iron. Since there are so many developments in the scalp lotion field, it is impossible to give you any generalizations at this point. Instead we suggest that you consult some text on the matter such as Poucher's "Perfumers, Cosmetics & Soaps," Chilson's "Modern Cosmetics" or deNavarre's "Chemistry and Manufacture of Cosmetics."

QUESTIONS AND ANSWERS

664. OIL TREATMENT FOR SCALP

Q: I want a formula for making a hot oil treatment for the scalp.

A. D. B.—KENTUCKY

A: Practically any kind of animal, vegetable and/or mineral oil can be used for this purpose. Offhand, it would be our opinion that a blend of corn, soybean and mineral oil could do the best job, suitably preserved and perfumed. The corn oil contains unsaturates that seem to be desirable in such treatments; the soybean oil contains a small amount of lecithin that is likewise desirable and the

mineral oil would leave the hair with some sheen.

665. CREAM SHAMPOO FORMULA

Q: We beg you kindly to send us a formula for cream shampoo and all necessary information.

A. K.—SWEDEN

A: A solid cream shampoo may be made from sulfated alcohol paste 37 per cent, 43 per cent colloidal gel of magnesium aluminum silicate, ¾ per cent glyceryl mono stearate, 5 per cent stearic acid, 1.55 per cent triethanolamine and water to make 100

j a s m a n t h i a j a s m o ^{and} p h o r e

A black and white advertisement for Firmenich & Co. The background features a close-up, high-contrast photograph of a woman's face, looking directly at the camera. In the foreground, several stylized, light-colored flowers with dark centers are arranged around a central circular text box. The text box contains the following information:

JASMANTHIA
Jasmin reproduced synthetically with all its delicate nuances. A remarkable flower simulation proven by universal acceptance.

JASMOPHORE
Reminiscent of the sweet, warm heart of Absolute Jasmin. Ideal for enriching Jasmin compositions or imparting an unusual floral note to perfume blends.

Homogeneous • Flowery • Tenacious

Firmenich & Co.
135 FIFTH AVENUE . . . NEW YORK 10, N. Y.
CHICAGO OFFICE: 612 NORTH MICHIGAN AVENUE • IN CANADA: CARAMELO, LTD., 390 WALLACE AVENUE, TORONTO



Veterans stage impromptu show at Purple Heart Party held in Crown Room

Graphic House

Story of Prince Matchabelli

How a famous business in perfumes and toiletries grew out of a Prince's hobby, and the part the Crown Room

JOHN ALLEN MURPHY *plays in promotion*

PRINCE MATCHABELLI, INC., makers of perfumes and women's toiletries, is a business that grew out of a prince's hobby.

Prince Georges Vasily Matchabelli was the eldest son of a noble Georgian family which was able to trace its royal origin for a thousand years. The Prince was educated in engineering so that he would be able to take over the management of the family's vast estates in Southern Russia. And he was educated in languages and in the ambassadorial art, so that one day he might enter the diplomatic service.

Fortunately the Prince had a hobby. It was this hobby that was to determine his career and not the pattern of princely living. Because of his distinguished position and exceptional charm of manner, Prince Matchabelli was a favorite in the drawing rooms of Europe. During those gracious years, he often took special delight in blending perfumes to fit the personalities of his friends. He claimed

to be able to blend perfumes that expressed the many delicate shades of difference in feminine personalities.

It was on one of these visits to the Continent, that he met the celebrated Swedish actress, Norina Gilly, whose stage name was Maria Carmi. They fell in love. He married her. But it was about this time that the Russian revolution took place. The Prince's estates were confiscated. He never saw his homeland again.

The Princess continued her successful career as a dramatic actress. She was the original Madonna in Europe and in England in that great spectacle play, "The Miracle." It was this fact that changed the course of the Prince's life. Morris Gest, the producer, brought "The Miracle" to the United States. And with it the Prince and Princess.

Prince Matchabelli was no longer a man without a country. He entered joyously into the life of this land. He wasted no time lamenting the past. Instead he decided to

enter business. He opened an antique shop in New York. From the first he did well. Socialites and theatrical celebrities flocked to his doors. Once again he drew on his hobby. He began blending perfumes to express the personalities of his friends and famous customers.

FROM HOBBY INTO BUSINESS

Many times in those years Prince Matchabelli must have thanked his lucky stars for his hobby. His riches, his estates, his princely possessions, all had been lost to him. All that remained was his name, his personality, his hobby. It turned out to be enough. On them he built a business of which he must have been proud.

I have talked to several persons who knew the Prince at this period. They speak of his infectious enthusiasm. They say he was a remarkable salesman.

But it was as a business showman that Prince Matchabelli excelled. He had a flare for promotion that won the limelight. He had a genius for developing beautiful packages and for selecting attention-compelling names for his perfumes. Such names as "Duchess of York," "Princess Marie," "Katherine the Great."

Prince Matchabelli supplemented his line of perfumes by adding bath oils, toilet waters, and colognes. Then a lipstick! This lipstick wowed the trade. It was a thundering black and white affair, and boldly emblazoned on it was the Matchabelli golden crown.

Now that his business was established in the United States, he opened offices in Paris and London.

Then Prince Matchabelli died, having caught the cold that led to his death while he was on the road.

After a time Prince Matchabelli Inc., was sold to Vick Chemical Co. Vick operates under a policy of complete decentralization. It supplies its subsidiaries with know-how and management and then leaves the management absolutely alone. For all practical purposes, a subsidiary is operated as though it were an independent business.

Under this management, Prince Matchabelli has done well. The first year sales were upped 115 per cent. The second year, 156 per cent; the third year, 250 per cent; the fourth year, 417 per cent. Current figures published by the Federal Excise Tax Commission show that contrary to the general impression, toilet goods sales have not fallen off during the first six months of 1947. This applies as well to Prince Matchabelli sales, which are maintaining the extraordinary gains they have registered since Vick took over.

Success of Prince Matchabelli, Inc., is due to the consistent carrying out of six basic policies:

- (1) A continuation and an expansion of the methods which the Prince, himself, had demonstrated to be sound.

- (2) Adherence to the practices which leading toilet goods houses have found to be successful, such as selective distribution, "own" demonstrators in stores, etc.

- (3) A line to fit a wide pocketbook range.

- (4) At the same time concentrating on a few items which have the greatest promotion potentialities. This prevents buyer confusion and makes it easier to create consumer acceptance.

- (5) Outstanding packages. From the first Prince Matchabelli has stood out in packaging, the most important identification of which has been the crown, adapted from his family crest. All through the years since the company

was first formed, this crown has served as trade-mark on all the packages and especially as the design for the original and unique crown-shaped perfume bottles. It is important that gift goods have irresistible packages. A high percentage of the better perfumes are bought to be given as gifts. To qualify as a desirable gift, a product must have acceptance, not only as to its quality, but as to attractiveness of its package and the prestige of its name.

- (6) Showmanship. While all of these six points are equally important, it is my opinion that it is Prince Matchabelli's showmanship that has made it the best publicized house in its field. The Prince, himself, was a master showman, but the pace he set seems to be increasing at 711 Fifth Avenue. Today showmanship is almost standard procedure. Not stunts or publicity for publicity's sake, for there is none of that. On the contrary, its showmanship is conducted in the grand manner. Its purpose is to dramatize its products.

For instance, several years ago Stradivari perfume was introduced. This perfume was created to sell for \$7.50 for one-half ounce. It was called Stradivari because of the distinction that name carries. But the name Stradivari was selected also because of its promotion possibilities.

STRADIVARI ORCHESTRA

There are dozens of ways that Stradivari might have been promoted. Here is how the Prince Matchabelli folks did it: They sponsored the Stradivari Orchestra on a radio network. How would you go about assembling enough genuine Stradivari instruments to make up a 15-piece orchestra? Remember that there are only about 600 Stradivari violins still in existence. There are also 60 of the Master's violoncellos and 14 violas and two guitars. Remember also that nearly all of these instruments are in museums or in collections or are owned by virtuosi who prize them as their most precious possessions. To play these treasured instruments on a commercial radio program, particularly en masse, seemed unthinkable. Yet the Stradivari Orchestra program was put on and became a Sunday afternoon feature that was enjoyed by millions. Within six weeks after its inauguration, the program won the highest Hooper rating ever earned for that time on Sundays. In another few weeks radio editors classified the program among the ten top symphony programs.

The 15-piece orchestra was comprised of eight violins, two violas, two violoncellos, one bass, one harp, one piano or celeste. The violins were always genuine Stradivari, and on occasions so were a viola and a violoncello.

How were these instruments assembled? They were rented from owners, mostly from the Rembert Wurlitzer and Emil Herrmann collections. The owners were willing to cooperate because of the high character of the program and because the instruments were played by the finest musicians selected from well-known symphony orchestras.

That is what Prince Matchabelli means by showmanship. All the while the Stradivari Orchestra was being sponsored, a merchandising program paralleled it. The result is that the Stradivari perfume almost immediately became the company's leading brand.

Now for an example of a different type of Prince Matchabelli showmanship. Del Russo is the Prince Matchabelli make-up expert. One day he happened to be visiting an art gallery, where he saw Botticelli's painting, "The Birth of Venus." He was fascinated by Venus' mouth, and stop-

ped to study it. An idea came to him. Why not recreate that mouth and make a fashion of it? Thus the "Botticelli Mouth" was born. Ever since, Del Russo has been one of the busiest persons in the country, appearing on radio programs, making personal appearances at all sort of gatherings, visiting stores, giving demonstrations of his art.

And who says that this kind of showmanship doesn't pay? In stores where Del Russo appears, sales of Prince Matchabelli make-up goods and of other products skyrocket. One dealer reported an increase of 2121 per cent over his average weekly sale. Another reported upping his Prince Matchabelli make-up sales 1005 per cent. Another, 946 per cent. In all cases, a good percentage of the increase in sales is maintained long after Del Russo's visits. The best proof of the success of the Del Russo make-up promotion is the repeated demand on the part of the department store buyers for a return engagement.

MAGNIFICENT SHOWROOM

In the fall of 1946, Prince Matchabelli introduced its Crown Jewel perfume. The management desired to launch its new perfume with a spectacular promotion and inasmuch as a new and elaborate showroom was being planned about the same time, it was decided to introduce the perfume coincidental with the opening of Crown Room.

William Pahlmann, one of America's foremost interior designers, was commissioned to design Crown Room. Was ever a designer given such an assignment? All he was told was to create the finest business showroom in the world. And he did just that. Certainly if there is one finer I have never heard of it. It is a sumptuous display of \$100,000 worth of regal swank. In all his visits to European royal drawing rooms, I am sure that Prince Matchabelli never saw anything quite equal to this room that now serves as a setting for the line of products that carries his name and that acts as a focal point for its promotion.

The crown motif rules the room. It is worked with exquisite taste into the furnishings and decorations of the room, and it is strikingly evident in the stained glass crown which is set in the massive two-story windows which face Fifth Avenue. Mr. Pahlmann had a decorator's dream to work with—a room which is a perfect double cube, 60 feet long. And he certainly made the most of his opportunity.

The Crown Room is on the same floor as the company's executive offices. It leads off the reception room. The decorative approach to Crown Room starts out in front of the elevators, leads through the reception room and on into the room itself. Three royal balconies overlook Crown Room. Here are arranged displays of Matchabelli products.

THOUSANDS OF VISITORS

Since Crown Room had its gala opening last October, many thousands have visited it, including toiletries buyers, merchandise managers, fashion coordinators, and publicity directors from the stores who sell the Prince Matchabelli line. A considerable percentage of fashion merchandise is bought in showrooms by visiting buyers. Buyers also visit showrooms to get ideas for displays, for merchandising, and for promotion in general. Buyers cannot leave Crown Room without being more Prince Matchabelli-conscious than ever. The cosmetic buyer of one big store returned home and immediately put in a commanding window display of the company's line, in which the Crown Room

color scheme was used. Another famous store is planning this fall to use photographs of the room as a background for its fashion advertisements. Cosmetic buyers are bringing their fellow buyers from other departments, so that they can see what Prince Matchabelli is doing to promote perfume as a fashion accessory and so that these other buyers can tie in the Prince Matchabelli line with their promotion efforts.

Recently there was a convention in New York of window display men; 350 of them visited Crown Room. Their work for months ahead is likely to be influenced by Prince Matchabelli's genius in showmanship and display.

Prince Matchabelli saleswomen in retail stores are issuing engraved invitations to their good customers inviting them to visit the Crown Room. Increasingly, women are accepting these invitations. They are coming in from all over the world. One visitor came in from Hawaii recently. She said she was told that there were four sights she must see in New York: Empire State Building, Rockefeller Center, Statue of Liberty, and the Crown Room.

Persons going by on the top of Fifth Avenue buses are craning their necks to look at Crown Room's exterior. Many of them have come in to ask, "What goes on here, anyway?" And when there is a party in the room in the evening, traffic outside is stopped.

It is these parties for which Crown Room is becoming famous. They are not parties in the whoopee sense. Let us call them events, for many of them are serious affairs. Since the room was opened, 57 of these events have been given; only a few of which were staged by the company itself. Most of them were put on by outside organizations, Prince Matchabelli, Inc., furnishing the room and its facilities free of charge. Most of the affairs have a charitable, fund-raising or educational purpose. In fact, the company does not lend the room to persons just to throw a party.

One of the company's own affairs was a radio broadcast of the Stradivari Orchestra. Another was a fashion show to introduce Paris Original, the spring lipstick color. Incidentally, this was repeated the next day for the benefit of the American Aid to France. The company gave a party in which Nancy Drury, poster girl of the March of Dimes Drive, was the center of interest.

The Crown Room has extended its facilities to the Pediatric Foundation Benefit, New York Journalism Sorority, the Federation of Women's Clubs, Women's National Book Association, Columbia University Perfume Course, Frontier Nursing Service, Outdoor Cleanliness Association—to select a few representative names.

An amusing party was put on by Smith College as a fund-raising effort. One of the stunts was telephoning at random to Smiths listed in the phone book and inviting them to the party.

One of the most memorable parties was given by the Syrian delegation of the United Nations Organization to celebrate Syrian National Independence. Many famous persons attended. Among them, Trygve Lie, permanent head of the UN, Sir Alexander Cadogan, the British delegate, our own Senator Austin, and, yes, Andrei Gromyko. Did I say "yes?" Gromyko is reported to have nodded assent when the whole, stuffed roast lamb, was served.

In all, the Prince Matchabelli Crown Room is a successful, unique, and significant development in public relations, symbolizing the character and the methods of Prince Matchabelli, Inc.

What Buyers Say About Perfumes

Department store buyers from coast to coast give their answers here to some of the problems which confront the perfumery industry

GENERALLY throughout the country the past several years have been very gratifying to the trade. During the war years the big difficulty has been materials, necessitating intensive research on the part of the suppliers. Gradually over the past two years of so-called Peace, important oils and other materials became available, many of them in somewhat uncertain fashion and at prices, in many instances, fantastic. In December it became evident that the public demand had reached a peak. In January and on through spring and summer, sales were increasingly disappointing. To ask why seems a waste of words to anyone in the trade familiar with economic conditions. Yet it became the topic of conversation whenever two people in the finished-goods industry came together on the street, at lunch, club, or in normal business contacts.

What to do about it became the proverbial "everybody's" business.

The department stores throughout the country are perhaps the most aggressive retail outlets. In these stores the

point of contact with the consuming customer is made. So we asked a representative number of these stores several questions which, it was thought, would give us interesting information. Much of it we know would be confirmatory. The way was open, however, for these buyers to express themselves freely from the point of vantage of personally meeting the public. In each case the questionnaire was addressed personally to the buyer.

We received 312 replies. They came from some of the largest department stores in the metropolitan communities, many from the best store in towns of 100,000, and cities and towns of from 10,000 to 50,000 populations. Practically every state in the union is represented in these replies which are also in fair ratio numerically to populations of their areas.

These replies are submitted below in roughly tabulated form. They can be studied from the standpoint of approximately September 15, 1947, reflecting the situation given by the buyers as of that date.

Question: Are your sales figures less than last year?

Answer:

312 questionnaires returned
308 answered
226 said "Yes" (ten of whom quoted losses from 1 per cent to as high as 14 per cent)
55 said "No"
13 said their sales figures were the same as last year's
14 specified only slight losses

Question: If "Yes," when did they start to decline?

Answer:

312 questionnaires returned
242 answered
121 after the Christmas season

(Dec. '46, Jan., Feb. '47)

73 spring, summer 1947

40 June to November 1946

8 soon after the war

Question: Are sales continuing to fall, or are they picking up?

Answer:

312 questionnaires returned
288 answered
162 sales are picking up
70 sales are continuing to fall
56 sales are currently holding even

Question: Do you find sales of cologne increasing?

Answer:

312 questionnaires returned
296 answered
183 said "Yes"

6 explained more clearly, saying "Very much so"

20 on the other hand, said "Slightly"

15 claimed their sales had remained the same

72 said "No"

Question: Why, in your opinion, did sales decline?

Answer:

312 questionnaires returned
258 answered

Due to the fact that many stores gave several reasons, the number of replies increased. Instead of 258 answers, there appeared 459. A large block of replies meant "less buying power" though expressed in various forms, as follows:

167 high cost of living; therefore, less for luxuries

- 75 less bonuses, lower wages
- 12 less employment of women
- 2 because of strikes

87 resulting conservatism became the general attitude

B. Other reasons given as follows:

- 25 merchandise scarce during the war now available and non-taxable

- 4 lack of salesmanship in clerks

- 4 lowered stock in stores

- 76 consumers stocked up (although 25 believed they were not)

- 3 decline in population (fewer army camps)—Mich., Mont., Tex.

- 3 terrible summer heat—Midwest

- 1 fewer tourists—Maine

Question: Is the EXCISE TAX holding back sales?

Answer:

312 questionnaires returned

302 answered

167 said "Yes"

51 said "Very definitely yes"

49 said "No" (but of these, 2 blamed the state tax)

35 said "Somewhat"

Question: What will be the salable price range for gift sets?

Answer:

312 questionnaires returned

298 answered

18 from \$1.00 to \$3.00

87 from \$1.00 to \$5.00

9 from \$1.00 to \$7.00

30 from \$1.00 to \$10.00

3 from \$1.00 to \$15.00

6 from \$1.00 to \$20.00

46 from \$2.00 to \$5.00

28 from \$2.00 to \$7.00

34 from \$2.00 to \$10.00

13 from \$3.00 to \$7.00

3 from \$5.00 to \$8.00

15 from \$5.00 to \$10.00

6 from \$5.00 to \$15.00

Question: Have you started buying Christmas stocks?

Answer:

312 questionnaires returned

310 answered

275 said "Yes" (15 "only lightly")

35 said "No"

Question: Do you favor smaller sizes at this time?

Answer:

312 questionnaires returned

295 answered

257 said "Yes"

38 said "No"

Question: From your point of sales contact with the consumer, what suggestions could you offer manufacturers?

Answer:

In all, 186 buyers answered the question, but again the answers contain, often, two, three or four suggestions on one questionnaire.

Suggestions on Packaging:

- 40 More attractive, eye-appealing

- 13 Streamline, gay, colorful

- 6 Not too fancy or extreme

- 4 Plastic packages or pre-war metal containers

- 1 Attractive wrapping

- 1 Cut glass

- 5 Less expensive packaging

- 3 Utility approach (ex. dressing table)

- 3 Sturdy, unbreakable, hard to soil

- 7 No box charge

- 3 Variety needed

Lines too much alike

New packaging suggested every six months

Change creates interest

- 1 Should keep retailers' displays in mind when designing packages

On Sizes:

- 87 advocated smaller sizes —people stock up!

- 2 wanted larger sizes

- 12 promote dram size of expensive perfumes

On price range:

- 48 desire promotion of the lower-priced perfumes

- 38 specify the \$1.00 to \$5.00 group

- 11 favor the \$5.00 to \$15.00 group

- 9 suggest a \$5.00 size in expensive perfumes (French)

On some new sales promotion approach:

- 8 desire better education of salespeople in the form of personal letters or actual visits from the representatives of the various cosmetic houses

- 2 suggest demonstration displays at the point of sale

- 7 want educational advertising to teach the consumer: of the high cost of essential oils; that perfume odors last longer than colognes; that the feminine costume is incomplete without perfume, and that one perfume does not go with every costume

- 6 suggest national advertising on a large scale—simultaneously in the East and West

- 8 believe that promotions should be concentrated on the best-selling items with the slow-selling ones being discontinued. Too many items are confusing. New luxury lines should not be introduced in times like these

- 14 suggest reducing the size rather than increasing the price, although reducing prices now is smart merchandising

- 3 want no cut-rate promotions —people stock up!

- 7 samples or testers to be given over the counter

- 2 tie-in sales (buy perfume; get free face powder)

- 3 suggest perfumed cards for statement enclosure

The questionnaires were returned from 238 towns and cities distributed in 39 states.

In cities over 1,000,000 population, 28 questionnaires were received.

In cities of 500,000 to 1,000,000, 21 questionnaires were received.

In cities of 250,000 to 500,000, 36 questionnaires were received.

In cities of 100,000 to 250,000, 52 questionnaires were received.

In cities of 50,000 to 100,000, 66 questionnaires were received.

In cities of 25,000 to 50,000, 59 questionnaires were received.

In cities of 10,000 to 25,000, 50 questionnaires were received.

The questionnaires from the three top groups came from stores of metropolitan prominence. Likewise, a careful study of the questionnaires discloses the fact that in all but a few cases the stores answering were representative.

Antioxidants in Vegetable Oils

The oxidative deterioration of fats may be checked by a satisfactory antioxidant . . . The sources

JOHN E. W. McCONNELL* *and characteristics of these antioxidants are presented*

VARIOUS oxy and hydroxy compounds have been used as antioxidants. A number of alcohols have been proposed including untreated, elaidinated or hydrogenated jojobanut alcohol. Acetyl-methyl carbinol has been reported to be effective as well as erol esters such as acetalacetone oxalate, benzalacetone oxalate, and ethyl and butyl esters. Oxalic acid itself possesses antioxidant properties.

Sulphydryl compounds are effective antioxidants by virtue of their free SH radical, but only in the presence of water and absence of cupric and ferric ions (György, Stiller, and Williamson (1943)). Thiourea, acetylthiodipropionate, and alkali metal thiocyanates have been recommended also.

Treatment of oils with a sodium bisulfite solution will destroy the peroxides present and thus will prolong their keeping quality. Peroxides themselves, formed by the oxidation of the acid chlorides of fatty acids containing less than 10 carbon atoms by 30 per cent hydrogen peroxide, have been proposed as suitable antioxidants. Oxygen absorbers such as reduced compounds of sulfur and phosphorus, low valence metals and salts, unsaturated organic compounds, ferrous, titanous, cerous, and manganous salts, have been used. Oil soluble stannous salts such as the oleate, stearate and benzoate are particularly adaptable to use in oils. Chlorinated or brominated paraffins, also oil soluble products, have been proposed.

Besides the naturally occurring derivatives of phenol there is a large number of synthetic compounds which possess antioxidant properties of varying degree. According to Lea (1939) monohydroxybenzene (phenol) is practically inert, but the substitution of suitable groups increases its activity. Thus the *o* and *p*-cresols and nitrophenols, thymol (2-isopropyl-5-methyl-phenol), and eugenol are all active. The introduction of a second hydroxyl group in the ortho (catechol) or para (hydroquinone) position enormously increases the activity, while the substitution of a third hydroxyl group to form pyrogallol (1, 2, 3) or hydroxyhydroquinone (1, 2, 4) still further enhances the effect. Activity now appears to have reached a maximum, tetrahydroxybenzene (1, 2, 3, 4) being only half as powerful as the 1,2 and 1,4 diphenols, and hexahydroxybenzene a completely inactive substance. The meta compounds

resorcinol (1,3) and phloroglucinol (1, 3, 5) are only very feeble inhibitors.

It appears necessary for antioxidant activity that the hydroxy groups be directly substituted in an aromatic nucleus. The hydrogen atoms of the phenolic group must also be free. Of the naphthols the α compound is a powerful antioxidant, the β , weak.

Various derivatives of the above and more complex phenolic compounds have been proposed as antioxidants. Among these are ethers of dilydric phenols such as hydroquinone, catechol, resorcinol, various amino phenolic compounds, condensation products of an alkenyl aldehyde reacting with a primary aminophenol, alkyl substituted phenols, reaction products of phenols and at least one molecule of a ketone, alkoxy phenols, etc. Some substances such as gallic acid, are both phenolic and acidic in structure, and as would be expected, they act both as antioxidants and as synergists.

SYNERGISTS

The synergists, because of their marked effect in reinforcing the antioxidants, are just as important as the true antioxidants themselves. These substances are acidic in nature and presumably act to regenerate the antioxidant by donating hydrogen to the oxidized antioxidant. Salts, esters and glycerides of the acids are often used because of their greater solubility.

The synergists appear to be of at least three kinds: 1. Di- and polybasic organic acids such as malonic, maleic, malic, citric, etc. Evidently, to be effective, acids containing more than three carbon atoms must also contain a hydroxyl group. Oxalic acid, the simplest dibasic acid differs from the other active acids in being a stabilizer itself without the presence of phenolic inhibitors (Mattill, 1945). Ascorbic acid, its isomers and esters belong to this class of synergists. 2. Certain inorganic acids containing at least two hydroxyl groups, especially sulfuric and phosphoric acids. 3. Di- and polyphenolic acids. These acids act both as synergists and as antioxidants. Gallic acid, its esters, pyrogallol, catechol, hydroxy-hydroquinone, and phloroglucinol are examples of this type.

Cephalin and crude lecithin act as synergists but pure lecithin, which does not contain a free hydroxyl group does not. Other crude phosphatides and salts or esters of phosphoric and phosphorus acids are also used. Table II illustrates the synergistic effect of several of these sub-

This article is concluded in this issue of THE AMERICAN PERFUMER.
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Contribution No. 627, Massachusetts Agricultural Experiment Station.

TABLE II
Inhibiting Effect of Acidic Compounds (0.02 per cent) on the Oxidation of the Crude Esters of Hydrogenated Cottonseed Oil¹

Substance	Antioxidant Index
Sulfuric acid	15-20
Phosphoric acid	15-20
Calcium dihydrogen phosphate	4-6
Kephalin	4-6
Citric acid	10-15
Arsenic acid	3
Oxalic acid	15-20
Malonic acid	10-15
Tartaric acid	10-15
Maleic acid	4-6
Malic acid	8-12
Pyruvic acid	10-15

¹ Olcott and Mattill (1936).

stances when added to crude esters of hydrogenated cottonseed oil.

EVALUATION OF ANTIOXIDANTS

As can be seen, the number and variety of substances which has been found to protect fats from oxidative changes is very large. No one investigator has studied all of these substances, and although there is much information available on the protection afforded by antioxidants data cannot be correlated quantitatively because of the different substances under different conditions, the different behavior of antioxidants on different fats under varying conditions of storage. However, there are a few substances which have been found to possess outstanding antioxidative properties. It must be remembered, however, that much of the available information has been determined under accelerated conditions, the results of which cannot always be interpreted directly into terms of shelf-life! It should also be realized that the use of antioxidants will not make a good quality fat out of a poor quality one and that the amount of antioxidant used should be the minimum amount needed for the desired shelf-life. Certain single antioxidants are of considerable value in lengthening the induction period of a fat, but for optimum effect, combinations of antioxidants and synergists have been found to be of most value.

From the information available it appears that gallic acid and its derivatives or other phenolic compounds such as pyrogallol, α -naphthol, or various quinones such as hydroxy hydroquinone or hydroquinone are most effective as antioxidants for vegetable oils containing natural antioxidants. Tocopherols, and related compounds, being present already, are ineffective in vegetable oils, nordihydroguaiaretic acid, ascorbic acid and derivatives, crude phospholipids and various inorganic acids have some effect.

Golumbic and Mattill (1942) studied the antioxygenic properties of gallic acid under accelerated conditions in some detail (Table III). This compound is both a phenol

TABLE III
The Antioxygenic Action of Gallic Acid and Related Compounds¹

Compound	per cent	Antioxygenic Index	
		lard	Crude cottonseed oil esters
Gallic acid	0.01	18	7-10
Ethyl gallate	0.01	4	6
Triacetyl gallic acid	0.02	1	3
Ethyl triacetyl gallate	0.02	1	1
Trimethoxy gallic acid	0.02	1	1
Pyrogallol	0.01	>60	32
Hydroxy hydroquinone	0.02	>60	18
Phloroglucinol	0.02	2	16

¹ Golumbic and Mattill (1942).

and an acid and acts both as an antioxidant and as a synergist as shown by its antioxidant effect in lard and its synergistic effect in crude cottonseed oil esters. Pyrogallol, hydroxy-hydroquinone and phloroglucinol behave similarly. The latter, although a good synergist, is only a weak antioxidant as can be seen by its low antioxygenic index when added to lard (a fat containing little or no natural tocopherols). The carboxyl and hydroxy groups in these compounds evidently have some effect on one another, this view is also supported by the facts that benzoic acid is not an acid-type inhibitor. For use in edible oils, active synergists such as ascorbic acid or derivatives, phospholipids, or an "allowed" acid such as citric would be preferred. The addition of two substances which will act synergistically with each other and with the natural occurring tocopherols results in greater stabilization than the use of one substance alone. Nordihydroguaiaretic acid together with various acids or phospholipids has proven very useful in vegetable oils (Table IV).

Although relatively inactive when added to natural vegetable oils, the non-acidic phenolic antioxidants, such as the tocopherols, are very active when added to vegetable oils such as coconut oil or to vegetable oil derivatives such as distilled fatty acids or their glycerides in which the natural antioxidants have been removed or destroyed. The activity of these compounds can be increased further by the use of acids (synergists). The phenolic antioxidants are also very effective in these fats, especially when fortified by synergists (Table V). Many combinations of antioxidants have been found to be very

TABLE IV
Antioxidant Indices¹

Concentration of test material added to substrate	Substrates			
	Cottonseed Oil (9013) ²	No. S (85-89) ²	No. C (67.5) ²	No. R No. AA (48) ² (23) ²
0.02% NDGA	1.1	...	1.4	...
0.05% NDGA	2.1	1.9	2.2	2.1
0.05% H ₃ PO ₄	...	...	...	2.8
0.05% Ascorbyl palmitate	2.1	1.4	1.3	1.7
0.03% Ascorbic acid	1.9	...	...	...
0.06% Ascorbic acid	2.5	...	...	...
0.05% Gallic acid	6.9	3.3	...	...
0.05% Gum Guaiac	1.0	...	...	...
0.05% Vanillin	0.8	...	...	...
0.05% Alloxan	1.4	...	...	...
0.05% Glutathione	1.3	...	...	...
0.05% Creatine	0.9	...	...	...
0.05% dl-Methionine	1.5	...	...	...
0.05% d-Arginine	1.1	...	...	...
0.05% l-Histidine	0.9	...	...	...
0.05% l-Cystine	1.1	...	...	...
0.05% d-Lysine	1.1	...	...	...
0.05% Viobin antioxidant	...	1.2	...	...
0.05% Viobin No. 5	...	0.9	...	1.6
0.05% Siam benzoin	...	1.1	...	...
0.05% Sumatra benzoin	...	1.2	...	...
0.05% Syrupy molasses	...	1.1	...	...
0.05% Octyl thiodipropionate	...	...	1.4	1.4
0.05% NDGA+0.01% H ₃ PO ₄	...	...	...	4.7
0.05% NDGA+0.05% H ₃ PO ₄	...	...	...	6.4
0.05% NDGA+0.1% H ₃ PO ₄	...	...	...	>>6.4
0.05% NDGA+0.05% citric acid	...	...	...	5.0
0.03% gallic acid+0.03% ascorbic acid	4.5	...	...	...
0.03% gallic acid+0.01% H ₃ PO ₄	2.4	...	...	...
0.06% gallic acid+0.06% ascorbic acid	6.5	...	...	...

¹ Mattill, Filer, and Longenecker (1944).

² Range of induction period in hours on control sample without added antioxidant NDGA—nordihydroguaiaretic acid.

TABLE V
Effect of Antioxidants and Synergists on the Oxygen Absorption of Methyl Esters of Fat Acids. (Concentration, 0.01 Per Cent. Temperature, 100 Deg. C.)¹

Antioxidant	Stability	
	Methyl Linoleate minutes	Methyl Oleate minutes
None	11	2.0
α -Tocopherol	41	8.5
α -Tocopherol and citric acid	67	35.0
α -Tocopherol and soya lecithin and d-isoascorbyl palmitate (0.02%)	78	36.0
nordihydroguaiaretic acid	141	43.5
nordihydroguaiaretic acid and citric acid	210	135.0
propyl gallate	96	34.2
propyl gallate and citric acid	158	101.0
benzylhydroquinone	85	13.0
benzylhydroquinone and citric acid	126	22.5

¹ Stirtan, Turer, and Riemenschneider (1945).

effective in stabilizing carotene in various vegetable oils. The stability of carotene is closely related to the formation of peroxides and hence to the development of rancidity in these oils; therefore the synergistic combinations shown in Table VI should also be of value in delaying the development of rancidity. It is interesting to note that α -tocopherol

TABLE VI
Antioxidant Index of Antioxidants (0.05 per cent) for Stabilizing Carotene Dissolved in Coconut Oil (Effectiveness based on time required for 20 per cent loss of carotene)¹

Antioxidant	Antioxidant Index	
	75 deg. C.	25 deg. C.
Control	1	1
Viobin	2	2
Phospholipid (cottonseed)	3	2
Diphenylamine	5	3
α -Tocopherol, l-ascorbyl palmitate, phospholipid	12	1
α -Tocopherol	19	41
Hydroquinone	36	61
Nordihydroguaiaretic acid	46	92
α -Tocopherol, citric acid, nordihydroguaiaretic acid	59	89
Viobin, nordihydroguaiaretic acid	66	102
α -Tocopherol, nordihydroguaiaretic acid	68	95
Phospholipid, nordihydroguaiaretic acid	85	103
Phospholipid, hydroquinone	85	138
α -Tocopherol, phospholipid, nordihydroguaiaretic acid	86	102
α -Tocopherol, citric acid, hydroquinone	93	104
α -Tocopherol, phospholipid, hydroquinone	118	139

¹ Bickoff and Williams (1946)

was quite effective in coconut oil which is relatively deficient in this antioxidant. Hydroquinone and nordihydroguaiaretic acid were quite effective antioxidants but the former is not accepted for use in foods. Acid-type inhibitors enhanced the effectiveness of these antioxidants. Lovern (1944) reported diresorcinylnquinol to be an exceptionally strong antioxidant for carotene and this compound may prove of value in fats also.

Columbic (1946) was the first to show a relationship between the oxidation-reduction potential and the antioxidant properties of a substance. They reported that the most effective fat antioxidants are found in the potential region between 848 and 484 millivolts; above and below these limits the activity was small or entirely lacking. Although lard was used in this test, vegetable oil derivative free of tocopherols would be expected to behave similarly. When the action of pairs of compounds in this series was examined many new synergistic combinations were found. As can be seen from Table VII, two phenolic inhibitors acted synergistically whereas previous to this, synergistic combinations were thought to be made up of a combination of a phenolic type compound and an acidic type. In each of the combinations the component of higher oxida-

TABLE VII
Synergistic Combinations in Lard¹

Inhibitor Added Per Cent	Antioxygenic Index at 75 deg. C.
α -Tocopherol	2
1,4-Naphthohydroquinone	1.5
Combination	7 ²
α -Tocopherol	2
2-Methyl-1,4-naphthohydroquinone	1.3
Combination	6.5 ²
Chromane-5,6-quinone	17
2-Methyl-1,4-naphthohydroquinone	3.3
Combination	28 ²
Toluquinone	41
α -Tocopherol	1.5
Combination	84
Gallic acid	1.3
Tocopherol (concentrate)	2
Combination	5.3 ²
Naphthotocopherol	5.8
Ascorbic acid	1
Combination	8.2

¹ Columbic (1946)

² Fresh when discontinued

TABLE VIII
Substances Exhibiting Antioxidant Properties in Corn and Cottonseed Oils Under the Accelerated Test Conditions:

Good Antioxidant Per Cent	Good Antioxidant Objectionable Taste Per Cent	Good Antioxidant Insoluble Per Cent
Beef-liver catalase concentrate 0.0013-0.012	6-palmitoyl-l-ascorbic acid 0.02-0.1	Liver powder, saturated
Crystalline beef-liver catalase 0.0013-0.012	6-lauroyl-l-ascorbic acid 0.02-0.1	Oat flour (Avenex No. 7) saturated
Corn germ oil (crude dry processed) 0.05-0.1 (off-flavor not objectionable)	Lecithin (crude) 0.005-0.1	Mung bean flour, saturated
Carotene (90 per cent beta, 10 per cent alpha) 0.002-0.0025 (too dark color)	Propyl gallate 0.01-0.1	l-ascorbic acid 0.06 (off flavor)
Gallic acid 0.0013-0.005	Caffeic acid 0.006-0.05	d-isoascorbic acid 0.05 (off flavor)
	Diphenylamine 0.05-0.5	
	Nordihydroguaiaretic acid 0.0025-0.1	
	Butyl ester of tyrosine 0.05-0.1	
	Gallic acid 0.01-0.06	
	Corn germ oil (dry processed) 0.1-0.5	
	Gum guaiac 0.01-0.1	
	Wheat germ oil extract plus citric acid (Viobin) 0.04-0.1	
	Carotene (90 per cent beta, 10 per cent alpha) 0.005-0.02	
	Nicotinic acid 0.0013-0.025	
	Niacin amide 0.006-0.025	
	Citric acid 0.004-0.01	
	Phosphoric acid 0.01	

¹ McCannell and Esselen (1947).

tion potential always fell within the range of effective inhibitors. The compound of lower oxidation potential presumably acts as a synergist.

Most antioxidants have been evaluated under accelerated conditions in the dark; however, Woodroof, Thompson, and Cecil (1946) reported that 0.1 per cent lecithin retarded the development of rancidity in peanut oil stored in the light at 70 deg.-90 deg. F. for almost two years. McConnell and Esselen (1946) tested the effect of various antioxidants on refined corn and cottonseed oils stored in sealed containers and exposed to light. Table VIII lists those substances which proved of value in accelerated tests involving exposure to artificial light at elevated temperatures. Those substances listed as good antioxidants as well as 6-palmitoyl-L-ascorbic acid and lecithin were also tested in oil stored in sealed bottles at room temperature in diffused light for up to 12 months. These antioxidants

did provide some protection against rancidity catalyzed by light but the degree of protection was insignificant when compared with that offered by the use of amber glass bottles or other methods of excluding the active part of the spectrum.

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Cosmetics

by Paul H. Douglas*

During the past few years there has been a tremendous expansion in the volume of business done in toilet goods. In war years costs mounted steadily but with the elimination of O.P.A. costs of materials and supplies rose rapidly. Labor costs kept pace. While in relation to 1941 the dollar buys 50 to 60 cents worth of general merchandise, it still buys \$1.00 worth of essential toilet goods. This is the situation our industry is attempting to maintain.

No other industry extended a warmer welcome to the Miller-Tydings Act than ours. Fair Trade Laws and the Miller-Tydings Enabling Act have been the greatest contributions toward the stabilization of our industry.

I certainly feel that having assured a definite margin of gross profit you as well as other retailers should be prepared to shoulder your responsibilities as merchants, which normally are to provide selling efforts, including such advertising, window, counter and case display space, that the volume potentials and margin of profit warrant.

Don't buy discounts or concessions. Where you put your efforts will naturally be determined by the following considerations: 1. Does the merchandise offer your customer honest value? 2. Is the margin of profit sufficient to warrant your sales efforts? 3. Does the manufacturer's advertising program give you reasonable assurance of turnover? 4. Has your past experience with the manufacturer been of such nature as to warrant your continued support? 5. Are your major efforts concentrated on the time tried and proven lines that can meet these conditions, remembering by all means to be flexible enough in your thinking to devote a certain amount of effort to new creations of merit even if the manufacturer is unknown?

On January 1, 1947, as a result of injudicious buying, and to a certain extent unavoidable late deliveries last Fall, retailers found themselves with seemingly heavy inventories. With few notable exceptions they proceeded to return what appeared to be everything they could lay their hands upon, often times with little or no regard as to the salability of the merchandise, the terms of sale or consequences to the manufacturer. Your manufacturers are

valuable assets to you. Don't let any action on your part jeopardize their well-being.

All of you are aware of the fact that the Government of its own volition called a Trade Practice Conference as a preliminary step to issuing rules for the Toilet Goods Industry. I believe rules will be issued which will become effective the early part of next year. I do not know what these rules will be, but don't be too optimistic as to their effect upon our present methods of operation.

You are large buyers, and I believe that the time has arrived for you to realize that any set of rules will have the tendency of equalizing the positions of large and small purchasers. A manufacturer may find himself in the position of saying "no" if saying "yes" would face him with the necessity of either breaking the law or extending an unusual promotion allowance to his list of customers.

The Federal Trade Commission is faced with a dilemma. So is our industry. We are both attempting to work out a set of practical rules that will fit within the framework of the law.

At this time it might be wise for you to begin to evaluate your manufacturers; what has a particular manufacturer meant to you in the past, what he means to you today and what he can mean to you in the years to come.

Government's part in the toilet goods picture is one of amazing contradictions. For many years Government labored under the delusion that toilet goods were luxuries, and it took the years of two long and devastating wars to make it clear that we deal largely in commodities essential to the maintenance of the American standard of living. Today, we can point to our approved production record during the war years and the Government's own purchases of our products. The Government bought and paid for this merchandise and then provided shipping space when space was at a premium and was being allocated only to actual necessities.

The Government still stubbornly persists in imposing a 20 per cent sales tax on our products. It started with 10 per cent under the guise of an emergency tax during the depression years of the thirties, then changed to 20 per cent as a war measure. I cannot urge too strongly that you, the Associated Chain Drug Stores, and the National Association of Chain Drug Stores, as well as every other organization of retailers, join with The Toilet Goods Association in an insistent demand for the abolition of this tax.

* Executive vice-president, Bourjois, Inc. and president, Toilet Goods Association.

Abstracted from a talk before the Fall Business Meeting of The Associated Chain Drug Stores, Hotel New Yorker, Sept. 9, 1947.

More attractive, smaller gift packages improve sales . . . Buyers want holiday novelties . . . Stores

JEAN MOWAT *plan to hold beauty clinics*

COSMETIC TRENDS IN THE MID-WEST

MORE than 600 buyers from leading stores in the Middle West were in Chicago last month to attend the Chicago Associated Toiletries salesmen presentation. This fifth annual show was the largest in number of exhibitors and in attendance ever recorded. Eighty-five firms had exhibits of perfumes, colognes and treatment lines, plus accessories such as brushes, compacts and fitted cases.

BUYING WAS SELECTIVE

New merchandise was studied and in many cases complimentary orders were given to test consumer acceptance. Less expensive merchandise was purchased than has been customary in recent shows because so many firms were complying with the requests of retailers for smaller packages to improve sales. A few houses offered these packages, such as Evyan, Ltd., with a cologne to retail at \$3. Its regular \$10 size was also available.

Buyers were cautious in the placement of orders for men's toiletries but the well established houses enjoyed a good business on staple items they have carried for many years. The addition of refills in 4 and 8 ounces at \$1 was important for sales to consumers, as were soap-refills for the fancy bowls.

Holiday prices were well defined at this presentation. Single units to retail at \$1 to \$2 had the volume business with a top of \$5; units of two were popular from \$3.50 to a top of \$20. Perfumes under \$20 and preferably in smaller sizes at \$10 had good acceptance. Fitted cases, complete with creams and colognes, were featured to \$195 with volume sales at \$25 to \$100.

Buyers reported that their stocks were in better condition now than in any recent time during the past two years. War-time brands and packages are virtually all out. There was some buying for promotion as the Northwest (St. Louis and Kansas City) stores have plans for an extensive 2-unit presentation of Milkmaid at a special price of \$2. This is to be featured as such. The recent excellent reaction to the 20 per cent off in the Dorothy Gray line reflects the tendency to avoid payment of the excise tax.

TREATMENT PROMOTIONS TO COME

The extreme heat throughout the past three months in the Middle West not only reduced the food crops but it ruined many skins that will need the best type of treatment preparations in the months ahead to make them comfortable. Many buyers report they plan to put these preparations on during October-November to bring their sales up to last year. In the Kansas City and St. Paul stores there is much accent being placed on treatment lines that are suggested as invigorating, vitalizing and give a smart skin finish. Minneapolis stores, such as Dayton's, are leading in the sale of throat and eye creams. This store has found excellent reception of its unit selling of cologne and powder.

That bath oils, tablets, bubble bath stocks are all low is apparent from the amount of business that was written at the show. Cochran's Shining Hour bath ensemble was a leader in the field, but this firm like all others was unable to accept new accounts. This is one of the markets where names were taken for some of the sales representatives were of the opinion that by the time the next show is held in Chicago new accounts will be welcomed.

Rubinstein, Dana, Evyan were among those having to refuse new accounts. All of them offered merchandise that was wanted. Dana reported that its current price cut had trebled its spot selling and predicted that other firms who followed the plan would find sales more easily made. That this is but one firm's opinion seemed to be true, for other firms had as much if not more business than they could handle at the prices quoted today. Buyers placed orders, but as indicated, smaller sizes and Christmas packages were chosen rather than the former large size. One or two leading firms had Christmas "sleeves" to put on packages so these could be removed after the holiday sale and the merchandise not be dated.

FEWER LIP STICK COLORS

There is buyer interest in the presentation of dated lipsticks and a rather careful check is being kept to obtain customer reaction. While a number of lines such as Germaine Monteil do not plan to reduce the number of colors, other firms have been taking inventory of their best selling shades and plan to concentrate on these. One house has reduced its line to eight shades and finds there is more business than when it had three times this many.

That long line of colors in both nail polish and lipstick has been a headache to many buyers who wanted to carry national lines. "I've got 150 different colors," said one buyer, "and it is too many. If the firms would cut down and have a longer space between the shades it would mean more sales," she said. One firm offered three small sticks of widely different hues for evening and day-time wear. Some firms are staying very much in the red tones and others are swinging into the grape tones for the purple cast

is expected to be good with the green apparel for this Fall.

There has been considerable buyer comment about the new preparations which enable a lipstick to be kiss and water-glass proof. Many stores report success with it. Salesmen report that Chicago isn't touching it to any degree, yet one of the chains has done an excellent sale on it, through clever advertising.

SOAP PROMOTIONS AT NEW PRICES ACTIVE

Soap sales by the Golden Rule, St. Paul; The Fair, Chicago, and stores in Kansas City produced a volume of business as prices were reduced. Wrisley reports that its new price range on soaps, and the return of Castile and savon royale to the line, has aided soap sales. It is one firm open to accept new business in its Spruce line and a number of good new accounts were opened. The fern line has been re-priced. It has been a good item and at the lower price will be an active holiday seller.

Not in many markets have buyers shopped to purchase new items. Staples they ordered immediately, but the holiday novelties had plenty of shopping before orders were placed.

The new plastic molded heads as corks on the new bottles at the House for Men, Inc., were liked. Parfait has unusual figure types to hang in the closet or the visual clothes bag. Ann Haviland had sachets in gay little packages with the flower to indicate the scent; Kathryn, Inc., has a purse-size compact for its cream powder with delivery promised for November-December.

Dram bottles of perfume by Gourielli, Inc., in a paper-weight was one novel item; Command Performance by Rubinstein in dram to one ounce size and colognes in 2 to 8 ounce bottles were given orders. Tussy had new metal perfume vials and Terpsichore was in a new size; Fabergé recognized the importance of smart packaging and presentation and featured duet at \$2.50 and quartette at \$5 with a choice of fragrances.

Many of the items presented at the Chicago show have been featured at others but the near-by larger cities all had their buyers in the market to study trends. Most of these men and women are not spending all their budget but are reserving a good portion of it for the last minute items that will be November presentations as Perhaps by Ann Haviland, John Fredericks' new T-L which is to be late, the double seal top on the dram bottle of Duncan Storm, Ltd., and the ultra modern design of the Savoire Faire packages which are for later delivery.

Re MEN'S LINES

Some idea of the extent of stock adjustments and clearances that have gone on through the Summer is now evident. One of the largest chains, that has stores in this country and Mexico, which used to carry about 30 lines of men's brands, is down to six; another retail dry goods chain that had 14 is now offering but two, and equally as important, a group of stores in the Northwest is using only two brands—but these are outstanding.

In men's lines there is a \$1 unit sale generally, and lines offering a variety of colors in bottles find this is important. One salesmanager stated that his son had sent him 15 different brands and cases of men's toiletries which he left in the South Pacific. "The women did all that buying," said this man, whose firm has been in the men's end about 20 years, "and now that the merchandise is being given

more display in men's stores we believe they will want full value for every cent they spend. This we will give, as we always have," he said.

Summing up the past nine months of business, most stores are just about equal with last year but have not all made their quotas. The major perfume sales to be made in the last quarter will bring up the year, as it has in other seasons. Only one buyer has said that removal of the excise tax would not do much for business. More than a dozen others agree that it would triple current sales in perfumes especially, and in colognes, while lagging treatment lines would move. The public is not stocked up and it is definitely resisting higher prices. Cologne sales have moved into one of the highest volume totals ever recorded, partly because of the long, hot Summer, and secondly, because many women have used it in place of perfume.

PROMOTION THEMES

A number of stores plan to hold beauty clinics this Fall. These may be in conjunction with fashion shows, or they may be merely demonstrations on how to apply make-up or treatment creams to obtain the best results. The few stores that have held these clinics report that the ignorance of the average woman in what-to-use and when is appalling. As buyers must train their own salespeople with the occasional help of a company representative, there is not time enough to make books and do this added work.

The tremendous increase of sales in the chains is due, say department and specialty shop owners, to the intensive training courses that are given. These are held one or two days a week on company time and not a before-opening or after-closing fifteen minute talk on what's new. While the department store buyers talk about this and declare their best people are leaving to join these chains, the personnel division in these same stores does nothing to combat the turnover in selling staffs. Buyers are asking for daytime classes to really train their people and give them a chance to compete with the expert knowledge the chain people have.

Women may be fickle but a good many companies that are returning their former types of containers to the line may be surprised to find competitive or even new lines giving them a race for the consumer's dollar. There are two new plastic bottles on the market that have made an instantaneous hit. The one that is pressed to produce a stream of deodorant has produced a volume of sales that has been a surprise to the stores that placed only a small order.

A leading line has a new plastic bottle for several of its items and this, as has the deodorant bottle, has been subjected to air and automobile pressure to see if the bottle or contents would break, and all have proved highly satisfactory. Their lightness in weight is another factor in their favor and they do not break if dropped. For perfume and colognes this is important. "Women are buying the bottle first," was a buyer's comment, "and this squeeze-one has already built up a following. When you put a name brand into a plastic bottle, well, it can't be kept in stock," she added.

Such trends, for manufacturers considering new packages, are important to watch, as are the plastic covered cases for lipstick, nail polish and cream rouge as featured by Arden—an inexpensive package but, with her name, easy to sell and sure of pleasing the customer.

Packaging

P O R T F O L I O



HELENA RUBINSTEIN: "Command Performance" Perfume is Helena Rubinstein's new French perfume. The sparkling crystal bottles will be offered in several sizes.

GUERLAIN: Natural Blush is a new addition to Guerlain's Shalimar-scented face powders. The face powder is packaged in an elegant black and gold embossed box.

COUNTESS MARITZA: Silent Night toilet water is presented in a new, glamorous, jewel-fashioned bottle. The accompanying box design is a decorative castle and landscape motif in black, evening blue, and star silver.

HELENA RUBINSTEIN
GUERLAIN



COUNTESS MARITZA



PRINCE MATCHABELLI

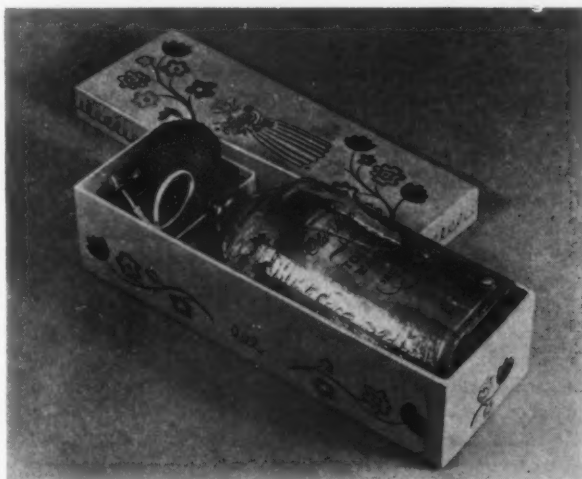
PRINCE MATCHABELLI: Prince Matchabelli introduces the memento size, a quarter ounce of Crown Jewel, in a crown bottle with a circlet of diamond-sparkling brilliants. The bottle is enthroned in a jewelry box, oval shaped, and taupe sueded, lined with satin.



SHULTON: Early American Old Spice Toilet Water and Atomizer set is presented by Shulton. The new colorful box contains a large bottle of roses 'n spice toilet water with red mesh covered atomizer.

SHULTON

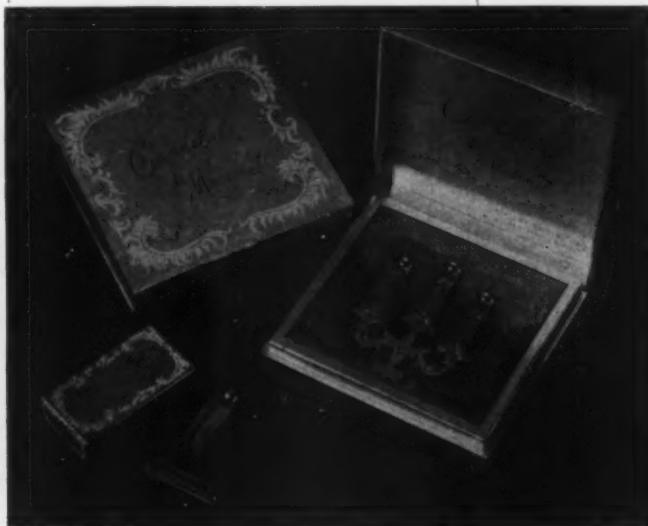
MASSENET: Candelabre de Massenet, a new gift package of three fragrances, Mandalay, Rhapsodie, and Altesse, is attractively packaged by Parfums Massenet. The bottles are set on a golden candelabra with a shimmering aquamarine background and are charmingly boxed in aquamarine and gold.



MASSENET

CIRO: Ciro presents their famous sachet in a completely different crackled blue bud vase. This is a reproduction of four fragrances in dry form, Surrender, Danger, Reflexions, and New Horizons.

CIRO



Short Adages

by R. O'MATTICK

WELL, here is October and only a very short time to Christmas! We can't say that typewriters are being worn out hammering out orders for Perfume Oils, Aromatics, Essential Oils, Bottles, Boxes, Colors and all and sundry but business *has* picked up and the lull of a few months ago is over. Of course, some gatherers and gleaners of orders are never satisfied—but that is perhaps as it should be in our system of free enterprise where everyone is free to work as hard as he wishes and gather in all the financial rewards he can.

A news item from London tells us that some women in that dear old village are wearing hats with a new millinery note—a hat commemorating the engagement of Princess Elizabeth and Lt. Mountbatten by displaying their pictures (right on the hat) in linked hearts. There has yet been no sign of anything here or in His Majesty's realm in the way of perfumes, lipsticks, after-shave lotions, face powder or mascara that can be linked to the engagement of the Princess. The idea may be worth, if not a million dollars, at least 50,000 pounds sterling, and is given herewith gratis to all and any readers, both loyal and occasional, of this Department. Gentlemen—to the Princess—and to ideas that will make the curve of the sales of cosmetics lurch forward!

Mr. Irving Bennett, Syntomatic's V.P., has been roaming all over the Wild West during the Summer and has sent in this clipping from the Ely, Nevada, *Daily Times*:

DEFINITIONS

- A *co-ordinator* is a man who brings organized chaos out of regimented confusion.
- A *conference* is a group of men who, individually, can do nothing, but as a group can meet and decide that nothing can be done.
- A *statistician* is a man who draws a mathematically precise line from an unwarranted assumption to a foregone conclusion.
- A *professor* is a man whose job is to tell students how to solve the problems of life which he himself has tried to avoid by becoming a professor.
- A *consultant* is an ordinary guy who is a long way from home.

Most "expert" predictors can predict merrily anything they think comes in their heads and get away with it. Why? Because if their forecast comes out they say "I told you so" and become super-experts of the First Degree. But if they miss their guess, by that time everyone has for-



gotten what it was they predicted—and they are safe on third base with their eyes turned towards home-plate. But we are one of the few readers of News Letters—Washington Letters, London Letters, New York Letters, Villageville Letters and all other kind of Letters who likes to do a little checking up once in a while.

Now, "Nation's Business," which is published by the Chamber of Commerce of the United States and which is a readable magazine and which we read every month, carries a "Management's Washington Letter." In the June issue—quote—"One of Government's top economists contends recession will hit, but not until July, 1948. Another says recession will hit next month. He's following the 1920 pattern, going by the calendar. You can get guesses for any timing you choose."

July 1948 isn't here yet so we can't say whether the first government top economist is right or wrong—we hope, of course, that he is dead wrong but we shall have to wait and see. As for the second government top economist, who said in June that recession will hit next month—meaning July—it is October now and while business isn't booming—do you think that recession has hit?

In Chicago—that marvelous region of low and high barometric pressures, the fee for marriage licenses has been increased from three to five dollars. Said His Honor, the Chief License Clerk, explaining the increased cost of matrimonial first steps: "You pay two dollars to see a movie nowadays, and it's over in two hours. A marriage lasts a lifetime."

Even before the thought came to us that not all marriages last a lifetime, and that many movies end much better than a few marriages, we were happy to note that the Chief License Clerk did not mention that you pay "two dollars for a lipstick or for a bottle of toilet-water." Making such comparisons are always harmful to the Cosmetic Industry, of which we are a firm defender if we are anything at all.

THE NATURE OF ALDEHYDES

The structure, characteristics and the range of odors of aldehydes and their use in perfumery are

R. W. MONCRIEFF *discussed by the author**

THE extreme smallness of the quantities of some aldehydes which could evoke olfaction has long excited wonder. Jacques Passy³¹ in 1892 determined the minimum perceptible quantity in millionths of a gramme per litre of air for some of the aldehydes. He found

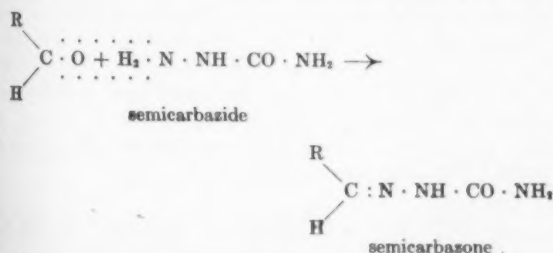
Citral just perceptible in $0.5-0.1 \times 10^{-6}$ grams/litre

Vanillin just perceptible in $0.005-0.0005 \times 10^{-6}$ grams/litre

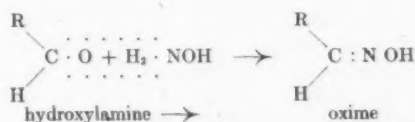
It may be noted, however, that much later Bach³² concluded that the threshold value of vanillin was 0.0000002 milligrams per cu. metre of air which is the same as $0.000,0002 \times 10^{-6}$ gram/litre or some 2000 times less than that found by Passy. A cave 1000 metres long by 100 metres wide and 50 metres high could be rendered odorous by one milligramme of vanillin, according to Bach's figures.

ESTIMATION OF ALDEHYDES

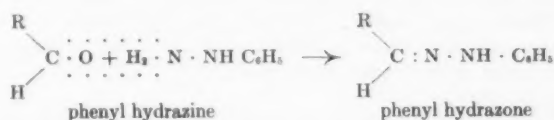
In such oils as lemongrass, cassia, cinnamon and lemon the aldehyde content of the oil really determines their value. It is usually determined by forming either the sodium bisulphite compound of the aldehyde or else the oxime. Aldehydes are characterized by the manner in which they condense with such reagents as semicarbazide, hydroxylamine, and phenyl hydrazine, forming respectively semi-carbazones, oximes and phenyl hydrazones. Not all aldehydes give semicarbazones which crystallize at all readily. In the case of the semicarbazones, the aldehyde is dissolved in alcohol and to it is added excess of a mixture of semicarbazide hydrochloride and sodium acetate. After standing for several hours water is added and the precipitated semi-carbazone is recrystallized from methanol



In the case of the oximes, equimolecular quantities of the aldehyde and hydroxylamine hydrochloride are dissolved in alcohol and sufficient alcoholic solution of potash is added to liberate the hydroxylamine. After heating on a water bath for an hour, the oxime will have been precipitated.



To make the phenyl hydrazone from phenyl hydrazine the latter is heated in alcoholic solution with the aldehyde under a reflux condenser.



Difficulties arise in the detection and estimation of aldehydes owing to the colloidal and soap-like properties of their bisulphite compounds and to the very slight differences in melting points and other physical characteristics of the oximes, phenyl hydrazones, semicarbazones, and thio-semicarbazones of neighboring members of a homologous series. Their tendency to polymerize also makes their estimation more difficult.

TESTING FOR ALDEHYDES

Tests that are commonly used to detect the presence of aldehydes are:

- (1) Resinification with alkalis.
- (2) Reduction of an ammoniacal silver solution to give a silver mirror. The solution is prepared by adding excess caustic potash to a solution of silver nitrate and then adding just sufficient ammonia to dissolve the precipitated silver oxide. When this liquid is mixed with a dilute aqueous solution of an aldehyde and the mixture warmed, a silver mirror is deposited on the sides of the tube.
- (3) Schiff's reagent. A solution of magenta is decolorized with sulphur dioxide and on adding an aldehyde to

*This article is concluded in this issue of THE AMERICAN PERFUMER.

this, the aldehyde combines with the sulphur dioxide and restores the color (pink) of the magenta.

METHODS OF SYNTHESIS

(1) *From natural sources.* This may sound a contradiction in terms but it is a fact that some of the perfumery aldehydes are almost invariably synthesized from natural products. Citral, which occurs abundantly in lemon-grass oil, for example, is obtained from this natural source and is used as the starting point in the synthesis of citronellal, the universally employed hydroxycitronellal and the ionones. The isolation of decylic aldehyde from coriander oil by Shorygin and Osipova has already been described.¹⁷

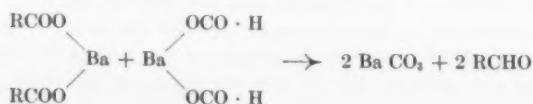
In very many other cases aldehydes are derived from natural products, such as coconut oil and fusel oil, but through the medium of a chain of reactions. In the two cases quoted above, namely citral and decyl aldehyde, the naturally occurring aldehydes are isolated directly from their natural environment. The synthesis of vanillin from eugenol, obtained from oil of cloves, may also be noted.

(2) *By the oxidation of a primary alcohol.* This is one of the oldest methods of preparing aldehydes. Benzaldehyde can be obtained by oxidizing benzyl alcohol, although the process is not used commercially. Acetaldehyde can be obtained from ethanol by oxidation with potassium bichromate and sulphuric acid. Most aldehydes can be prepared from the corresponding alcohol by this method; as a rule the oxidation is carried out in an ice-jacketed vessel and with stirring. The trouble is that if the temperature is allowed to rise, the oxidation overshoots the mark and some acid is formed. CrO_2Cl_2 which is milder is sometimes used to avoid this difficulty. Octyl aldehyde is customarily prepared by the controlled oxidation of octyl alcohol which is obtained from methyl caprylate by reduction as already described. Similarly dodecyl (or lauric) aldehyde is obtained by the controlled oxidation of lauryl alcohol which itself is derived by reduction from lauric ester.

(3) *Dehydrogenation of primary alcohols.* In principle this is the same method as that described under (2) but a different means is employed to secure the same result. Instead of a chemical oxidizing agent such as acid bichromate mixture being used, one uses a hot metallic surface which abstracts hydrogen which combines with oxygen in the air, from the alcohol to leave the aldehyde. For example, when primary alcohols in the gaseous state are passed over finely divided copper dust, obtained by the reduction of copper oxide at 250-400 deg. C., they yield hydrogen and an aldehyde.

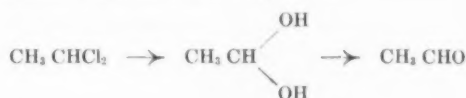
The preparation of phenyl acetaldehyde by passing phenylethyl alcohol over a silver catalyst at 550-570 deg. under a partial vacuum is a recent modification of the method and has already been described.²

(4) *Dry distillation of the calcium salt of the acid with calcium formate.* This is the classical method, but yields as a rule are low and it is generally used when all else fails. The use of barium instead of calcium salts has sometimes given improved yields. The reaction is



The writer may add in parenthesis that he once used this method successfully for making a ketone, only in this case the calcium formate is dispensed with. By the dry distillation of calcium adipate it was found possible to make cyclopentanone in reasonably good yield. Attempts were made to improve the yield by using the tin and lead salts instead of the calcium salt but this had the effect in practice of reducing the yield. An interesting modification of this method in which the vapors of *p*-isopropyl- α -methyl hydrocinnamic acid and formic acid are passed over manganese oxide has already been described.¹⁶

(5) *Hydrolysis of dichlor compounds.* This is restricted to the special case where both the substituent chlorine atoms are attached to the same carbon atom. On hydrolysis the two chlorine atoms are replaced by hydroxyl groups and as it is unusual for one carbon atom to hold two hydroxyl groups, decomposition takes place and an aldehyde is formed. Ethylidene chloride may be converted to acetaldehyde in this way, but the method is only of academic interest in the fatty series.

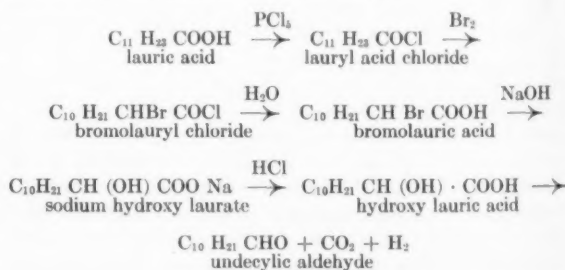


In the aromatic series it becomes an important method and benzaldehyde is manufactured by heating benzal chloride $\text{C}_6\text{H}_5 \text{CHCl}_2$ with water and calcium carbonate, the last to neutralize the hydrochloric acid released.

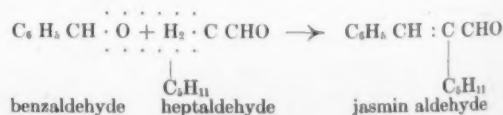
(6) *Distillation of α -hydroxy acids.* Some of the higher straight chain fatty aldehydes, especially if they contain an uneven number of carbon atoms, are conveniently made by saponifying an α -bromo fatty acid chloride and decomposing the hydroxy acid so obtained. Nonyl aldehyde is so prepared by the dry distillation of α -hydroxy capric acid.



In a similar way undecylic aldehyde is obtained from lauric acid through the following steps:



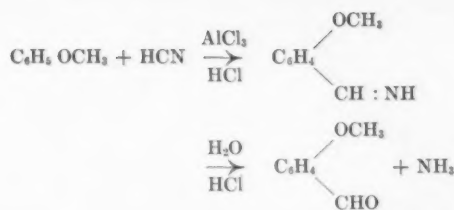
(7) *Condensation of two aldehydes.* A long chain aldehyde may often be built up by condensing together two shorter chain aldehydes. The preparation of jasmin aldehyde from benzaldehyde and α -nthaldehyde has already been mentioned.²¹ The two are condensed together in 50 per cent aqueous alcohol in the presence of caustic. It will be seen that the hydrogen atoms on the CH_2 group α to the CHO group are reactive.



The preparation of unsaturated aldehydes by condensing an aldehyde having a CH_2 group in the α -position to the keto group with an aldehyde of other character was in fact patented by I. G. Farbenindustrie²³ using an alkali to promote the condensation. The production of β -isopropyl- α -methyl hydrocinnamaldehyde by condensing cuminaldehyde with propionaldehyde and reducing the unsaturated aldehyde so produced has already been referred to. Meuly³³ in 1937 patented a method for the production of an aldehyde such as α -hexyl cinnamaldehyde. An aldehyde bisulphite compound having a CH_2 group next to the aldehyde radicle such as octyl aldehyde bisulphite compound is treated with an aromatic aldehyde such as benzaldehyde in a liquid medium such as aqueous methanol and in the presence of an alkaline condensing agent such as caustic soda over a period of some hours. The similarity of this to the earlier I.G. specification will be noted. A somewhat similar method is described in French patent 844182.³⁴ It shows how cyclic aldehydes whose nucleus contains conjugated double bonds, such as benzaldehyde may be crotonized with aliphatic aldehydes to give aldehydes suitable for use in the perfume industry. The two aldehydes should be mixed in appropriate proportions, cooled to -15°C . and agitating while adding a cold concentrated alkaline solution which contains 40 grams potassium carbonate and 0.5-2.0 grams caustic soda per 100 grams solution. The temperature is maintained at or near 0°C . for 12-30 hours and then the mixture is extracted with ether; the ethereal extract is neutralized with mineral acid, filtered, and the aldehyde separated by distillation *in vacuo*.

(8) *Condensation of toluene with an aldehyde.* The preparation of jasmin aldehyde from toluene and heptaldehyde by Rosenthal has already been mentioned²⁰ as has indeed a similar synthesis by Nametkin & Shagalova,²³ the condensation being carried out in aqueous alcoholic solution and using 1 part of heptaldehyde to 5 parts toluene. Earlier I. G. Farbenindustrie³⁵ had protected the following method. Toluene or an alkyl derivative of it is treated in alkaline aqueous solution with an aliphatic aldehyde which contains at least four carbon atoms and which has a CH_2 group adjacent to the CHO group. The amount of water in the reaction mixture is kept low so that no separation into two layers occurs. As an example, a mixture of toluene with a solution of caustic potash in 96 per cent alcohol may be heated gradually at 10 deg. C. with γ -butyraldehyde and the mixture distilled *in vacuo* after eliminating the alcohol and the potash, so giving α -ethyl cinnamic aldehyde. In general, homologues of cinnamaldehyde are obtained. The corresponding body α -isopropyl cinnamaldehyde is particularly noted as being useful in perfumery.

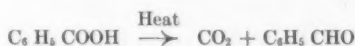
(9) *Aluminum chloride reaction.* Various methods involving the use of aluminum chloride are known for preparing aldehydes, particularly aromatic aldehydes. *p*-Tolylaldehyde has been prepared from toluene by treating with a mixture of carbon monoxide and hydrogen chloride in the presence of dry cuprous chloride and aluminum chloride.³⁰ Only a trace of cuprous chloride is required. Aldehydes of phenols and phenol ethers may be prepared by passing a mixture of hydrogen chloride and hydrogen cyanide into a mixture of the phenol ether and aluminum chloride; the imino compound which is formed is decomposed with hydrochloric acid and steam distilled.



Another method is to bring ethyl chloro oxalate into contact with an aromatic hydrocarbon in the presence of aluminum chloride.

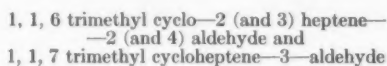


The α -keto acid is obtained from the ester by saponification and on dry distillation loses carbon dioxide to give the aldehyde.



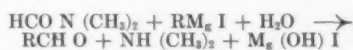
(10) *From acetylene derivatives.* Rupe³⁷ described a method whereby an acid such as formic or acetic is treated with an acetylene derivative which contains a free hydrogen atom in the acetylene group. The acetylene compound used as a starting material may be made from acetylene and the sodium compound of a ketone. The preparation of such compounds as cyclohexylidene acetaldehyde and β -methyl cinnamaldehyde is described.

(11) *From ketones.* A method is described by Herold³⁸ by which β -methyl nonyl propionaldehyde may be prepared from methyl nonyl ketone. The ketone is reacted with zinc and an ester of bromoacetic acid and the methyl nonylacrylic acid ester so obtained is hydrogenated to the corresponding saturated alcohol, which is then oxidized to the alcohol. French patent 744344³⁹ describes how such aldehydes may be produced from ketones.



(12) *Grignard reactions.* A number of methods for the preparation of aldehydes by using Grignard reagents have been elaborated.

If the magnesium alkyl iodide is reacted with dimethyl formamide the alkyl aldehyde is produced.



When formic ester is reacted with magnesium alkyl iodide using a large excess (3 : 1) of ester and a low temperature an aldehyde is formed.



Another method is to react isocyanides with magnesium alkyl compounds.



TASTE

Taste may play its part in a perfume. Usually odor contributes much to "taste" and most of "taste" is in fact



Aldine
No. 1946

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odor, but occasionally the reverse happens and taste contributes to flavor and to odor. Furukawa⁴⁰ investigated the taste of many aldehydes, taking the precaution of keeping the nose shut during the tasting tests. Many of the aldehydes had sweet tastes notably anisaldehyde, cinnamaldehyde, heliotropin, salicylaldehyde, hydroxybenzaldehyde, peryllaldehyde and furfural, but the following had no sweet taste: benzaldehyde, vanillin, citral, citronellal, acetaldehyde and formaldehyde.

References to two reviews not so far noted in this paper are given.^{41, 42}

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- ⁴³ W. C. Meuly (to du Pont) U. S. Pat. 2102965 (1937).
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- ⁴⁵ I. G. Farbenind. A. G., German Pat. 553,037 (1926).
- ⁴⁶ A. Gattermann & Koch, *Annalen* **357**, 313 (1907).
- ⁴⁷ H. Rupe Brit. Pat. 267054 (1926).
- ⁴⁸ I. Herold, *Seifensieder Ztg.* **62**, 171-2, (1935).
- ⁴⁹ Soc. Anon. M. Naef et Cie French Pat. 744344 (1933).
- ⁵⁰ S. Furukawa *J. Tokyo Chem. Soc.* **41** 706-28 (1920), & *Chemical Abstracts* **15** 1145 (1921).
- ⁵¹ E. L. Saul *Drug Trade News* **15** Nos. 20-22 (1940), **16** Nos. 1, 3 (1941).
- ⁵² L. Valli-Donnan *Rev. parfum.* **7** 74-8 (1927).

Technical Abstracts from Scientific Literature

Propylene glycol: a solvent of active principles. J. Rae. *Pharm. J.* **152**, 122, 1944. Having previously experimented with propylene glycol as a solvent of certain vegetable drugs, vegetable coloring matters, fruit juices and culinary herbs, and as a preservative, the author decided to prepare a series of "tinctures" and as far as possible to ascertain the solvent properties of the glycol as compared with those of alcohol. Five vegetable drugs were selected, the active constituents of which differ in their chemical properties. They were extracted with propylene glycol, and with alcohol, and as nearly as possible the amount of active principle in each of the extractions was determined. The powdered drugs employed were rhubarb, catechu, senega, balsam, tolu and opium. They were macerated in wide-mouth stoppered bottles with the solvent for 7 days, shaking occasionally, and then filtered. The propylene glycol was diluted with distilled water to the required strength to correspond with the strength of alcohol used. From the results obtained it would appear that propylene glycol satisfactorily extracts drugs containing tannins, saponins and anthraquinone derivatives, in the last instance being superior to alcohol. It is also a good solvent of the morphine content of opium. It is not a good solvent of balsam tolu, and is inferior to alcohol in extracting the same tolu, and is inferior to alcohol in extracting the acid constituents. All the solutions made with propylene glycol have remained absolutely clean and free from deposit for 2 mo. except that of balsam tolu, which turned cloudy within 12 hr. of its being filtered. (Through *J. of the Amer. Pharm. Assoc.*, **34**, 40, 1945.)

Determination of the Dry Hiding of Pigmented Coatings. Philip L. Gordon and Michael A. Gildon. *Ind. & Eng. Chem. Anal. Ed.*, **16**, 442, 1944. An empirical equation expressing the relationship between the contrast ratio of a dry pigmented coating and the weight of material applied is developed by rectification of the dry hiding curve, using the method of averages. The equation is shown to apply to a series of four unrelated points, and furnishes the means for calculating the dry hiding at any desired contrast ratio. The method presented yields reproducible results, provides the opportunity for neutralization of errors introduced by faulty technique, and will also function where high dry hiding pigments are used. The equation is applied successfully to data presented by other investigators where the range of contrast ratios covered reaches

0.999. A comparison between the derived equation and other empirical hiding power equations indicates excellent agreement in the case of white paints and a definite variation in the case of colored coatings. Theoretical and practical interpretation of the data and comparisons are discussed.

Permanent waving of hair—compositions for use in the U. S. 2,310,687. A composition, stable over normal climatic ranges, and providing on the application of heat the formation of a protective and porous coating on the hair permitting the penetration of steam and the vapor of a "hair waving principle" while maintaining in the hair its natural oil and moisture, comprises a homogeneous emulsion ranging from a free flowing to a pasty consistency and containing a fatty alcohol adsorbent medium having more than twelve carbon atoms, such as cetyl or stearyl alcohol, a fatty ester dispersing agent such as lanolin, a sulfite "waving principle" such as sodium sulfite, and a hydrolyzable supporting colloid such as wheat starch.

Quantitative Determination of High Molecular Weight Primary Aliphatic Amines. A. W. Ralston & C. W. Hoerr, Chemical Research Laboratory, Armour & Co., Chicago, Ill. *Ind. & Eng. Chem. Anal. Ed.*, **16**, 459, 1944. A simple, rapid, and accurate method for quantitative determination of primary aliphatic amines containing 12 to 18 carbon atoms in the presence of their corresponding secondary amines is based upon the separation of the primary amines by distillation. It can also be employed for the analysis of lower molecular weight primary amines and their salts in the absence of secondary amines.

The most frequently encountered interfering substance in commercial amines is ammonia, which can be removed readily by a preliminary heating of the alkaline sample under reduced pressure. At 50 deg. C. and 20-mm. pressure, the amount of the higher primary amines lost by vaporization is within the experimental accuracy of the analysis. Other volatile organic bases are not generally encountered in such mixtures. None of the other common impurities of the commercial aliphatic amines interferes with the method; nitrile distills simultaneously with the amine, but does not react with the acid in the receiver; free fatty acid is converted to soap and prevented from hydrolysis by the excess alkali; and amide does not effect the analysis.

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FLAVORS

Rum Flavorings

The flavor, characterized by rum, has found wide acceptance over the years and is used successfully in the confectionery, baking, frozen dessert and tobacco industries

MORRIS B. JACOBS, Ph.D.*

IT would indeed be inadequate to write about rum flavorings without some description of the preparation of the alcoholic beverage itself, since the beverage is a principal rum flavoring agent.

RUM

Rum is a distilled alcoholic beverage which is made only from fermented sugar-cane products. Its principal source is molasses but the scum and foam on top of sugar-cane juice is also commonly used. The addition of much of these materials results in a product of lower quality. Sugar-cane juice is also used, at times, but principally when it is economically feasible to do so, except in the Virgin Islands where it is the principal raw material for rum manufacture.

Jamaica is generally considered to be the home of rum but it is actually produced in all countries where sugar cane is grown in large amounts. For instance, rum is a commercial product in Brazil, British Guiana, Cuba, the East Indies, Haiti, Madagascar, Mexico, Puerto Rico, Santo Domingo, Trinidad, the United States and the Virgin Islands.

Jamaica.—Jamaica rum is generally graded into three quality classes: "local trade" or poorest quality, distilled

for alcoholic strength and consumed principally in the island; "home trade," a full-bodied rum, for consumption in the British Isles, comprising the bulk of the product produced; and "export trade" formerly made chiefly for export to Germany where its very high flavor value enabled it to be employed for flavoring and blending purposes, and for the preparation of imitation rum.

In its manufacture molasses is diluted to 25-30 per cent sugar and is made into a mash with skimmings, sometimes with cane juice, and with the spent liquor from the stills, known as "dunder." The latter stimulates fermentation because it contains nitrogenous materials and salts which serve as yeast nutrients.

The addition of dunder also serves to influence the flavor and taste of the final product.

Fermentation sets in rapidly in the mash which contains about 12 per cent of fermentable sugar on standing and is completed in about 6-12 days, although at times, longer periods are necessary.

The distillation is customarily carried out in steam—or fire-heated pot stills, yielding a distillate which has unpleasant characteristics attributable to aldehydes and acids. These are diminished by rectification but the use of pot stills requires great care. It is a common practice to trap a portion of the total rectified distillate and use this portion for blending or flavoring succeeding distillates. Rum is aged in a manner analogous to that used for whiskey.

*Adjunct Professor of Chemical Engineering, Polytechnic Institute of Brooklyn.

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VANILLA BEANS—GUMS—"T. & B."

STURGE'S CHALK
"Extra Light"—"Dense"

LANOLIN
USP — Pharmaceutical — Cosmetic Grades

ESSENTIAL OILS—Naturals—Synthetics
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Jamaica rum is customarily dosed with caramel to give it a dark color.

United States.—Kentucky and Massachusetts are the States in which the principal amount of rum made in the United States is prepared. Such rums are generally medium-bodied, distilled at below 160 deg. proof, in continuous and pot stills. The raw product cannot be used as such for beverage purposes because of its flavor which has to be mellowed by aging.

Virgin Islands.—In these islands only sugar-cane juice, as mentioned, is used to prepare the mash. In order to prevent prior fermentation, this is transferred as quickly as possible by haulage or pump to fermenters. It is distilled in pot or continuous stills to provide a product of 150-170 deg. proof, which is stored in charred barrels. Most of the commercial Virgin Island products are blends.

Puerto Rico and Cuba.—These are the lightest bodied of commercial rums. A mash prepared from molasses, is fermented as rapidly as possible and is distilled in continuous stills at high proof, of the order of 160-185 deg. Such drastic distillation serves, of course, to eliminate most of the congeners which would give the product its flavor.

Demerara.—The process of rum manufacture in British Guiana may be paraphrased from the report of the British Guianas Planters Association (1909): the wort is prepared by diluting molasses with water to a density of 1.060. It is made slightly acid by the addition of sulfuric acid in sufficient quantity to set free some of the combined organic acids, but not so much as to leave uncombined sulfuric acid present in the wash. In some distilleries small additions of ammonium sulfate are made to the wash, in order to supply readily available nitrogenous food for the yeasts and thus enable them to multiply with rapidity and retain a healthy active condition. The reason for making the wash slightly acid is to guard against the excessive propagation of the butyric and lactic organisms, and to render it more suitable for active alcoholic fermentation. Within a very short time from the time the molasses was diluted, it enters into vigorous fermentation and rapidly proceeds to more or less complete attenuation in 30 to 48 hours.

In British Guiana the distilleries are of three kinds: (1) Those using pot stills or vat stills which are practically only modified stills; (2) those using both pot stills or vat stills and Coffey or other continuous rectifying stills; and (3) those using only Coffey or other continuous rectifying stills.

COMPOSITION

The composition of beverage rum of many sources has been exhaustively studied by Peter Valaer and the reader is referred to his articles. These studies cover the amount of alcohol, acids, aldehydes, esters, color, etc., present. There have been relatively few analyses of the flavor components of rum. One of these which is of interest is the following:

Component	Grams
Formic acid	0.008
Acetic acid	0.078
Butyric acid	0.004
Capric acid	0.007
Ethyl formate	0.021
Ethyl acetate	0.476

Ethyl butyrate	0.006
Ethyl caprate	0.013
Extract (sugar, etc.)	0.755
Invert sugar	0.281
Raw sugar	0.125
Ash	0.01
Alcohol	68.23

It is interesting to note that of the synthetic flavoring agents used in rum formulations, ethyl acetate, ethyl formate, and acetic acid are common and that they loom large in the analysis given above.

IMITATION RUM

It was mentioned in connection with the description of rum manufacture in Jamaica that certain rums were distilled to provide a heavy body. These heavy-bodied rums lend themselves to the preparation of imitation or cut rum. This is a very old practice and is described in detail August Gaber's *Die Liqueur Fabrication*, the seventh edition of which appeared in 1889. In one method of cutting heavy-bodied rum, alcohol is diluted to the same proof as the rum, and then depending on the amount of flavor capacity of the rum is mixed with it in various ratios up to as much as five parts alcohol to one of rum. The mixture is then generally colored with caramel and stored in casks at about 75 deg. F. for several months.

In an alternative method, about 100 quarts of the mixture of diluted alcohol and rum is placed in a distillation apparatus and 5 quarts of water is added. The mixture is distilled until about 5 per cent remains. This distillate is colored with caramel and sometimes with rum essence and aged.

RUM ETHER

Commercial rum ether, which is used extensively as a principal rum flavoring agent or as the principal component of many synthetic rum flavors, consists of various ethyl esters and aldehydes. One preparation is made by esterifying pyroligneous acid, which is obtained by the destructive distillation of wood, with alcohol and then distilling the mixture to obtain the esters. An alternative method of preparation is to esterify the pyroligneous acid with alcohol in the presence of pyrolusite or manganese dioxide and sulfuric acid. Sometimes starch is included in the latter mixture. Ethyl oxyhydrate is said to be a rum ether.

RUM FLAVOR COMPONENTS

Natural.—An examination of many formulations in the literature show that the following components made from natural products have been recommended or suggested for use in rum compositions:

Cassia oil	Chamomile oil
Ceylon cinnamon oil	Violet essence
Cognac oil	Neroli
Vanilla extract	Storax
St. Johns bread extract	Jamaica rum
Safran extract	Peruvian bark tincture
Peru balsam	Catechu tincture
Raisin extract	Orange blossom oil
Birch tar oil	Angelica root tincture
Woodruff essence	Cedarwood oil
Ylang ylang	Gallnut
Clove oil	

Synthetic.—The synthetic components shown in many formulations are:

Acetic acid	Ethyl pelargonate
Butyric acid	Isoamyl caprate
Capric acid	Caproaldehyde
Ethyl formate	Furfural
Isobutyl formate	Diacetyl
Methyl acetate	Ethyl pyruvate
Ethyl acetate	Amyl pyruvate
Butyl acetate	Benzaldehyde
Isobutyl acetate	Vanillin
Ethyl butyrate	Coumarin
Isobutyl butyrate	Eugenyl acetate
Isoamyl butyrate	Isoeugenyl acetate
Propyl isobutyrate	Acetylvanillin
Isoamyl caproate	Rum ether
Isoamyl caprylate	Caramel

Each of the materials or compounds listed that have been recommended or suggested for incorporation into rum flavorings plays a role. Sometimes the effect produced is known and at other times one can guess the contribution that is made. In some instances, the function that the material exercises is not known. In a subsequent article these materials and their use in rum flavorings will be discussed at greater length.

Flavored Notes

Many flavoring materials in use today have been used for thousands of years. Thus the Bible (Ex. 30:23-25) mentions the use of cassia bark, sweet cinnamon, sweet calamus as components of holy ointment. Undoubtedly these same ingredients were used for flavorings purposes.

* * *

In addition to the use of caramel as a rum flavor component, there are many formulas which call for the use of tincture of catechu and still more which call for the inclusion of vanilla extract. These tinctures are very useful in such formulations.

* * *

Some additional compounds can be added to our want list. Who makes or can supply:

Butyl undecylate or butyl hendecylate
1, 2, 4-Trimethoxy-5-propenylbenzene (Asaron)
Tetrahydrogeraniol
Farnesol
Anisyl formate
Butyl naphthyl ether

* * *

Clove oil and eugenol are other components of artificial apple flavors.

* * *

Thyme and clove are considered excellent for flavoring lamb.

* * *

Instances occur again and again where a particular substance, added only in small quantity, to a formulation brings that composition to life. I have mentioned the use of salt. At other times a little acid is just the thing, and at other times, perhaps, a bit of sweetening. Such activity is very

likely a type of synergist action. Synergism as applied to flavoring agents has not been investigated to any extent even though such investigations might prove to be of economic importance for if by the incorporation of a less expensive ingredient, which has synergist action, a smaller amount of a more expensive ingredient could be used without loss of flavor, tremendous savings could be obtained.
—M. B. J.

Sugar Recovery Retarded in Philippines

The core of Philippine economy for many years has been centered in the production for export of a relatively few major commodities. Heading the list was sugar, followed closely in recent years by gold and base metals. Coconut products, abaca and cordage, and tobacco products completed the list. Of all these industries, the war took its toll—of some more heavily than of others.

In the field of sugar production, 6 of the 41 mills in operation when war came were totally destroyed. Four were severely damaged and 8 were about 50 per cent demolished. The remaining 23 escaped with moderate or slight destruction. It is estimated that \$25,000,000 would be required to bring sugar milling capacity to the level of prewar production. Owing to the lack of cultivation during the war years, planting will take about three seasons to reach prewar acreage. Under the agreement with the United States and the Republic of the Philippines—signed in Manila July 4, 1946—the Philippines sugar export quota to the United States will remain at 800,000 long tons of centrifuged sugar and 50,000 tons of refined, but after 1954 duty will be imposed, increasing gradually until it equals the Cuban duty in 1974.

Philippine sugar production costs have been constantly higher than Cuban costs. It is believed, however, that by improving the strains and milling processes, the Philippines may be able to retain the American market. Production in 1947-48 is expected to amount to about 320,000 long tons, with exports totaling 200,000 tons.

Conditions in British East Africa

Sugar production in British East Africa (Kenya, Uganda, Tanganyika and Zanzibar) for the 1946-47 crop year may be the largest since the 1942-43 season. Through May 31, 1947, actual production was 44,443 long tons, and it is estimated that production for the total crop year will approximate 69,350 long tons.

Sugar exports and territorial consumption allocations in British East Africa are controlled by the Ministry of Food in London. Present allocations to each of the territories are based on 80 per cent of the 1942 consumption figures.
—*Foreign Commerce*.

French Indo China Pepper

The 1947 pepper harvest in Indo China was completed about the end of June. Official estimates are about the same as those of last year, approximately 1,500 metric tons, although trade sources estimate the crop as low as 700 tons. Exports in the first 5 months reached 716 tons.

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U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1947

U.S.I. Exhibits In West Coast Show

The exhibit of U. S. Industrial Chemicals, Inc. for the Pacific Chemical Exposition, held on Oct. 21-25 in the Civic Auditorium in San Francisco, features a wide range of U.S.I. chemicals, including industrial alcohols, solvents and synthetic and natural resins. On a six-foot center panel of the firm's exhibit at Booth 64, a map of the United States in color shows the various production points, sales offices, and warehouse locations of U.S.I., all of which are illuminated by flashing lights. Samples of U.S.I.'s major products are displayed and are available for inspection.

Methionine Nomenclature Altered by ACS Committee

The amino acid *DL*-methionine will hereafter be written *DL*-methionine in accordance with a new naming system adopted recently by the Nomenclature Committee of the American Chemical Society.

The alteration in methionine notation is an application of the new ACS rule which states that "the optically inactive mixture or racemic compound of the stereoisomers is designated by the prefix *DL* in small capital letters." The report continues, "Although the use of small capital letters is desirable in printed material mainly for esthetic reasons, typewritten material will of necessity employ ordinary capital letters. In a manuscript prepared for a printer, a double underlined *DL* indicates that the symbol is to be set with small capital letters."

Methionine, one of the ten amino acids considered essential for the growth and repair of animal tissue, is in increasing demand for pharmaceuticals and feedstuffs. It is now employed widely in the treatment of liver damage and the fortification of oral and intravenous protein hydrolysates. Recent papers indicate that it may also be used in the therapies for arteriosclerosis, anemia, and benzene poisoning. To meet heavy requirements for this vital amino acid, U.S.I. is continuing to accelerate its production schedules.

Pure Lubricant Additives Made With Aid of Alcohol

Barium salts of alkylphenol sulfides can now be prepared pure enough to be used in the manufacture of heavy-duty, anti-sludge, anti-corrosion lubricating oils, according to a patent issued recently. Outstanding feature of the process is the use of barium sulfide in place of the customary barium oxide or barium hydroxide. Specifically, 2,4-dibutyl-, or -diamyl-, or 4-octyl-phenol monosulfide is heated in alcohol with an amount of barium sulfide sufficient for neutralization. After evolution of hydrogen sulfide has ceased, the solvent is evaporated.

Swing To Tung Oil Varnishes Foreseen In Paint Industry

Trend Spurred By Current Availability of Tung Oil —
Price Is Now Lower Than Linseed or Dehydrated Castor

The American paint industry is now expanding its production of oleo-resinous varnishes and vehicles for use in surface coatings, according to a reputable source. This trend is due largely to the free availability of tung oil (China wood oil) after a lapse of many years, at a current price much lower than either linseed or

dehydrated castor oil—the only two oils now on the market which can be favorably compared with tung oil. For many purposes, however, both these oils are considerably inferior to tung in performance. Fish oil and soya-bean oil, at the moment, are lower in price than tung oil, but are not generally regarded as belonging in the same class as tung. Soya-bean oil, by itself, for example, is not usable as a varnish oil, and fish oil has definite color and drying limitations.

Tung Oil Techniques 'Rediscovered'

Despite the fact that tung oil has been freely available for many months—frequently at attractive price levels as compared to other oils—the paint industry has been slow in returning to any major use of this material. There are many reasons for this. The processing of tung oil, for example, is not easy and has, in many instances, almost become a "lost art." Tung oil has the unique property of changing from a liquid oil to a solid gel within a matter of minutes at elevated temperatures, and unless suitable precautions are taken in the processing or cooking of a varnish employing tung, a gelled or spoiled batch is likely to result. If extreme caution is taken to prevent this by under-cooking the oil, then a condition described as lack of "gas proofness" occurs. This condition results when tung oil is under-cooked, and the varnish will dry with a hazy, frosted or "alligator" effect, instead of to a clear, uniform film.

During World War II and most of the previous Sino-Japanese War, tung oil was entirely unavailable for civilian use. Varnish chemists who have been in the industry for less than ten years have had little occasion

MORE

U.S.I. Announcement on Fischer-Tropsch Chemicals Meets Favorable Reception

The announcement made by U. S. Industrial Chemicals in September concerning the signing of a long-term contract between the company and Stanolind Oil & Gas Company for the sale of all water-soluble oxygenated chemicals produced from the first two Fischer-Tropsch plants has met with a highly favorable reception. The large quantities of alcohols, ketones, acids, aldehydes, and esters made available by this process will benefit all industry—and members of the coatings, pharmaceutical, and related fields went on record last month in commendation of U.S.I.'s newest activity. Approximately 300,000,000 pounds of chemicals are expected to be marketed annually from this new synthetic source.

Tropical Butter

Butter which melts at 105 degrees Fahrenheit and keeps for long periods without refrigeration is one of the newest developments in the food industry. Spreadable as conventional butter at room temperatures, it contains diacetyl, hydrogenated peanut oil, skim milk powder, and other products. Secret behind it is a special process carried out in stainless steel equipment.



Once again pure phenolics, such as U.S.I.'s Aroclene 700 (heat reactive) and Aroclene 775 (non-heat reactive) are being utilized with tung oil in the preparation of highest quality spar varnishes.

New Trade Mark Law Trouble You? Read This

A pamphlet is now available from a national association explaining the new Federal Trade Mark Law now in effect. The primary purpose of the pamphlet is to point out some important aspects of the new law and to call attention to some pertinent principles applying to selection and protection of trade marks.

CONTINUED **Swing To Tung Oil Varnishes**

to utilize it in formulations. Many are unfamiliar with the procedures necessary for proper handling of this unique oil. As these techniques are again being discovered, the use by the industry of this favorable raw material is being increased.

Special Resins Unnecessary

The fact that phthalic anhydride and, therefore, alkyd resins, promise to continue on the scarce list for many months to come, is an additional factor accelerating the return to hard resin-tung oil varnish formulations. During the scarcity of alkyd resins and tung oil, it was necessary to use linseed or dehydrated castor as the best oils for the production of varnishes or paint vehicles. Both of these oils are relatively slow in bodying and drying properties and produce relatively soft films. It was, therefore, necessary to fortify these oils with specially developed modified phenolic resins of the Arochem 365 or 335 types to secure reasonable drying speed, hardness, and chemical resistance. Modified non-phenolic types such as Arochem 603 and 607 were also developed to furnish similar drying speed and hardness, but superior color properties.

With the return of tung oil as a major factor in varnish formulation, it is no longer necessary to depend upon these special resins to furnish desirable characteristics, since tung oil, in itself, imparts the desired fast bodying, fast drying, and high resistance properties. It is desirable, if not necessary, to use less reactive types of resins than those mentioned above to assist in controlling the

Pasteurization Test Can Now Be Used On Almost Every Dairy Product

A modified phosphatase test, originally developed and perfected for use on cheddar cheese to determine whether the milk used in making the cheese had been pasteurized or not, has now been developed so that it can be applied to practically all dairy products, according to a government bulletin.

The improved test depends on the fact that all raw milk contains a phosphatase enzyme, and that this enzyme is destroyed by heating at a temperature a few degrees higher than that required to destroy the most resistant of the pathogenic or disease-producing organisms that may occur in milk. The test provides an accurate, quantitative measure of the phosphatase activity in milk or in products made from it. It is consequently a reliable index of the adequacy of pasteurization.

With the improved test, it is possible to detect a decrease of as little as a single degree Fahrenheit in the pasteurizing temperature, government scientists claim. The test is stated to be so sensitive that it will detect, for example, the presence of one pound of raw milk in 2,000 pounds of properly pasteurized milk, whether the test is applied to the milk or to products made from it. Since the enzyme is more concentrated in cream, the test is said to be capable of detecting one pound of raw cream in 5,000 pounds of pasteurized cream.

extremely rapid bodying of tung oil.

Modified phenolic resins of the Arochem 90, 95 and 115 types, which were used with tung oil in large amounts before the war, are again being used in large volume for this purpose. Also pure phenolics, such as Arochem 700 (heat reactive) and Arochem 775 (non-heat reactive), are again being widely utilized with tung oil in the preparation of highest quality spar varnishes and chemical resistant finishes.

Certain ester gums, such as U.S.I. Ester Gum "B," or polymerized variants, such as Arochem 345 or 349, also provide superior drying, bodying, and resistance qualities when formulated with tung oil.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

To keep lard, oils, and fats fresh, a new antioxidant has been approved by the United States Department of Agriculture and the Food and Drug Administration in quantities up to 1/100th of 1 per cent. (No. 245)

U.S.I.

A new-type respirator, said to be the first of its kind, is claimed to incorporate a revolutionary dust filter for protecting industrial workers exposed to poisonous and disease-producing dusts smaller in diameter than 24 millionths of an inch. (No. 246)

U.S.I.

An all-purpose grease to replace the five now used for automobile lubrication has been announced. The grease, which is alleged to resist high-temperatures, severe working conditions, and water, will apparently fill all lubrication requirements. (No. 247)

U.S.I.

To extend carnauba wax-water emulsions is the purpose of a new compound which may be used to replace up to 40 per cent of wax solvents as well as the gums and resins now used as extenders. (No. 248)

U.S.I.

A new permanent ink that sticks to glass is reported to be non-corrosive, non-poisonous, and non-flammable. It is also said to be useful on marble, china, porcelain or ceramics. (No. 249)

U.S.I.

A new-type detergent and wetting agent, suitable for use in the textile, tanning, dairy, pulp, paper, and laundry industries, is now available in ready-to-use aqueous solutions or in flakes. (No. 250)

U.S.I.

An oil-resistant compound for splicing electric wires is recommended by the manufacturer for use on any electrical circuit coming in contact with oil. (No. 251)

U.S.I.

To extend paints, two new types of soft, decomposed silica are now being offered which may also be used as abrasives for polishes and as fillers in the manufacture of rubber. (No. 252)

U.S.I.

A flame-resistant acetate molding plastic has been announced. The manufacturer states it is available in quantity in a number of colors including maroon, black, red and tan. (No. 253)

U.S.I.

To protect highly polished metals during fabrication and manufacturing operations, a new stripable protective coating is offered which is said to resist chemical agents and corrosion. (No. 254)

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y.

U.S.I.

BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS

Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)

Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96% Absolute

*Super Free Anti-freeze
*Solax proprietary Solvent

*ANSOLS

Ansol M
Ansol PB

*Registered Trade Mark

ACETIC ESTERS

Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS

Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS

Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS

*Diato
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES

Acetoacetanilide
Acetoacet-ortho-aniside
Acetoacet-ortho-chloranilide
Acetoacet-ortho-faluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalopropionate
Ethyl Sodium-Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS

Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES

Riboflavin Concentrates
*Vasone 40
*Curbay B-G *Curbay Special Liquid

ACETONE

Chemically Pure

RESINS

Ester Gums—all types
Cango Gums—raw, fused & esterified
*Araplaz—alkyds and allied materials
*Aralene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS

Calladons Ethylene
Ethylene Glycol Urethan
Nitrocellulose Solutions ex. Methanoline
Printed in U.S.A.

SOAPS

Soap Products in Use

from *The Milwaukee Journal*, *The Omaha World-Herald* and *The Philadelphia Evening Bulletin*

IN extending coverage of brand preference shown in buying soap THE AMERICAN PERFUMER has included a new source of information in this report. It is a consumer analysis compiled by *The Evening Bulletin* of Philadelphia, Pa.

Other markets covered are the same as those given here for 1946. They are published by *The Milwaukee Journal* and *The Omaha World-Herald*.

SOAP PRODUCTS FOR FINE FABRICS

Soap products for fine fabrics are used by 99.4 per cent of the Greater Milwaukee families. The number of brands in use this year is 78, compared with 66 in 1946.

Lux Flakes again proved to be the most popular brand. It is used by 36.0 per cent of the families, or 83,567. It has slipped from a high last year of 41.6 per cent. Ivory Flakes again places second with a percentage of 21.4; or 49,676 families. This is approximately its standing of last year. Dreft is third with 12.6 per cent. Other brands used in decreasing popularity are: Chiffon Flakes, Vel, Ivory Snow, Ivory Bar, Duz and Lux Bar.

The Omaha World-Herald reports a 100 per cent sale of soap for use on fabric in the Greater Omaha market. This year shows 30 brands in use compared with 35 in 1946.

Dreft is in first place. It is used by 34.9 per cent of the families as compared with 29.0 per cent for last year. Lux Flakes, second, showed a gain of over 100 per cent over last year. It is now used by 28.9 per cent, where the figure for 1946 was 13.4. Ivory Flakes is in third place with 17.8 per cent. Other brands used are: Vel, Ivory Snow and Ivory Bar.

In 1947, 99.4 per cent, or 503,953 families used soap

for laundering fine fabrics in the Philadelphia market. The number of brands reported as used came to 37, an increase over 1946 which showed 34.

Lux Flakes, the leader shows a slight loss in sales, 37.7 per cent this year compared with 41.7 per cent for 1946. Ivory Flakes is second with 37.3 per cent, and Ivory Snow third with 9.1 per cent. Other brands in the chart, in descending order are: Ivory Bar, Chiffon Flakes, Rinso and Duz.

HOUSEHOLD LAUNDRY SOAP

This year, 231,429 families, or 99.1 per cent are using soap for the household laundry in Milwaukee. There has been a steady decrease since 1944 in this use. At that time the figure stood at 99.7 per cent.

Oxydol again placed first with 49,063 family users, or 21.2 per cent. Last year it went into first place with 17.9 per cent. Fels Naptha Bar placed second with 38,880 family users or 16.8 per cent. This is a decrease from last year when 17.1 per cent used this product. Rinso is third with 15.4 per cent using, the same standing as in 1946.

Following in descending order are: Duz, John Hanser, Super Suds, Ivory Bar, Fels Naptha Flakes, Perk, Ivory Flakes, Rad, American Family Bar, American Family Flakes and P & G Bar.

In Omaha Oxydol and Rinso have the same standing as in Milwaukee with 31.8 and 14.0 per cent respectively. Duz takes second place with 21.0 per cent. Oxydol and Duz both show gains over last year, while Rinso shows a decrease in the number of users.

Other brands used are: Blue Barrel, Fels Naptha Bar, Super Suds, While King, Omaha Family, P & G and Ivory Bar.



BEAUTY—plus!

SOLVAY
TRADE MARK REG. U. S. PAT. OFF.

SNOWFLAKE CRYSTALS

for BATH CRYSTALS



- Uniform size and brilliant sparkle in each crystal
- Readily absorbs dyes
- Takes perfume easily
- Softens water promptly and effectively
- Dissolves instantly
- Attractive package appearance
- Will not change physically or chemically in the package
- Mild and non-irritating to the skin
- Special detergent properties help soap work better
- Free-flowing—ideal for filling machines
- Low cost

Give your bath-crystals package a head start on the market with Solvay SNOWFLAKE CRYSTALS! These beautiful true crystals have a glisten and sparkle . . . a breath-taking eye appeal that creates immediate consumer acceptance.

But this eye appeal—important as it is in producing sales—is not the whole story. *Your product will maintain its leadership* when you use Solvay SNOWFLAKE CRYSTALS because of the *plus factors* that you get along with the beauty. Check the complete list of advantages that SNOWFLAKE CRYSTALS offers you . . . then picture your label on a package of these perfectly performing bath crystals.

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 Recler Street

New York 6, N. Y.

BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • Houston
New Orleans • New York • Philadelphia • Pittsburgh • St. Louis • Syracuse



SOLVAY SNOWFLAKE CRYSTALS

*Trade Mark Reg. U. S. Pat. Off.

In Philadelphia there are 52 brands of soap in use for household laundry. In 1946 there were 38.

Rinso is the leader with 26.6 per cent or 134,454 families. This is an increase over last year which showed 25.7 per cent. Fels Naptha Bar places second with 20.9 per cent, a gain over the 16.4 per cent of 1946. Duz is third with 13.6 per cent.

Other soaps listed are: Ivory Flakes, Ivory Bar, Oxydol, Super Suds, Fels Naptha Flakes, Ivory Snow, Lux Flakes, Kirkman's Flakes, Swan and Octagon Bar.

SOAP FOR DISHES

In Milwaukee, 232,830 families, or 99.7 per cent use some type of soap product for dishes.

Although declining from 16.7 per cent to 12.7, Ivory Bar retains first position in sales. Dreft shows a spectacular rise from 5.5 per cent to 12.4, thus taking over second position, within 0.3 per cent of the leader. Ivory Flakes is third with 11.6 per cent. In 1946, it was second with 13.2 per cent.

Other brands in demand are: Duz, Vel, Oxydol, Rinso, Chiffon Flakes, Lux Flakes, Super Suds, Ivory Snow, John Hanser, Swan and Perk.

In Omaha, Dreft duplicates its remarkable sales record. Although it was first in 1946 with 23.9 per cent, this year it shows sales of 42.6 per cent. Vel, which is second, bettered its position with 17.7 per cent compared with 11.6 per cent for last year. Duz is third with 9.1 per cent of the families using soap for dishes.

Other leaders, in descending order, are: Oxydol, Ivory Bar, Rinso, Ivory Flakes, Lux Flakes, White King, Super Suds, Swan and Ivory Snow.

BRANDS OF DISH SOAP IN USE

There are 52 brands of soap used for dishes in this market compared to 63 last year, and the product is used by 82,635 families or 99.8 per cent.

The total number of brands of soap products used for dishes in Philadelphia is 60, compared with 44 for last year.

Ivory Flakes is the leader with 24.4 per cent, approximately its standing of last year. Ivory Bar is second with 17.6 per cent, a decrease of almost 2 per cent from 1946; and Rinso is third with 14.9 per cent.

Other brands are Duz, Ivory Snow, Lux Flakes, Fels Naptha Bar, Super Suds, Oxydol, Swan, Chiffon Flakes, Dreft, Kirkman Flakes and Fels Nautha Flakes. It is interesting to note that Dreft does not maintain the sales record in this territory that it enjoys in Milwaukee and Omaha. The percentage of families using the product amounts to 1.5.

TOILET SOAP FOR THE BATH

Of all families, 232,597, or 99.6 per cent, buy regular toilet soap for bathing in Milwaukee. Sixty-six different brands reported. The number of brands in use during the past four years has varied only slightly.

The favorite among all brands of toilet soap for the bath is Lifebuoy with 21.0 per cent. Ivory and Lux are tied for second place with 18.9 per cent each. Other bath soaps listed are: Palmolive, Sweetheart, Camay, Swan, Cashmere Bouquet and Woodbury.

Forty-six brands of toilet soap for the bath are registered from Omaha, three more than were listed in 1946. Lifebuoy, Palmolive and Ivory, respectively, hold the first three

user preference positions. Lifebuoy 23.2 per cent, Palmolive 17.8 per cent, and Ivory 15.3 per cent. The relative standing of the three brands remains unchanged from what it was in 1946.

Other brands in the chart are: Lux, Sweetheart, Camay, Cashmere Bouquet, Woodbury, Swan and Wrisley.

Philadelphia reports that 502,541 families, 99.1 per cent, use 42 brands of toilet soap for bathing. This represents seven more brands than were in use in 1946.

The leading brand is Lux with a following of 27.5 per cent, Lifebuoy is second with 20.7 per cent, and Ivory is third with 17.1 per cent. They are followed by: Palmolive, Camay, Sweetheart, Woodbury, Cashmere Bouquet, Swan and Wanamaker.

HAND AND FACE SOAP

Top position among all brands of toilet soap for hands and face in Milwaukee goes to Lux with exactly the same popularity recorded for a year ago, 27.6 per cent of the buyers. With an increase from 14.3 per cent to 17.8, Palmolive jumps to second place on the chart. Sweetheart is third with 15.2 per cent, followed closely by Ivory with 14.9 per cent.

Other brands listed are Camay, Cashmere Bouquet, Lifebuoy, Woodbury and Swan.

LITTLE CHANGE IN NUMBER OF BRANDS

There was little change in the number of brands listed this year, 72 compared with 75 for 1946.

The 1947 analysis of toilet soap for hands and face registers 47 brands on the Omaha market, three more than last year. Palmolive is first on the list with 24.5 per cent compared with 23.4 per cent in 1946. Second is Lux with 22.7 per cent, a drop from 23.7 in 1946. Camay is third with 13.3 per cent.

Other brands listed are: Sweetheart, Woodbury, Ivory, Cashmere Bouquet, Lifebuoy, Lava and Swan.

There are 44 brands of soap for hands and face in use in Philadelphia compared with 42 in 1946. Lux is again the most popular soap, with a sale of 31.3 per cent. It is followed by Ivory with 19.9 per cent and Palmolive with 13.6 per cent.

Other soaps are: Camay, Lifebuoy, Woodbury, Sweetheart, Cashmere Bouquet, Swan and Wanamaker.

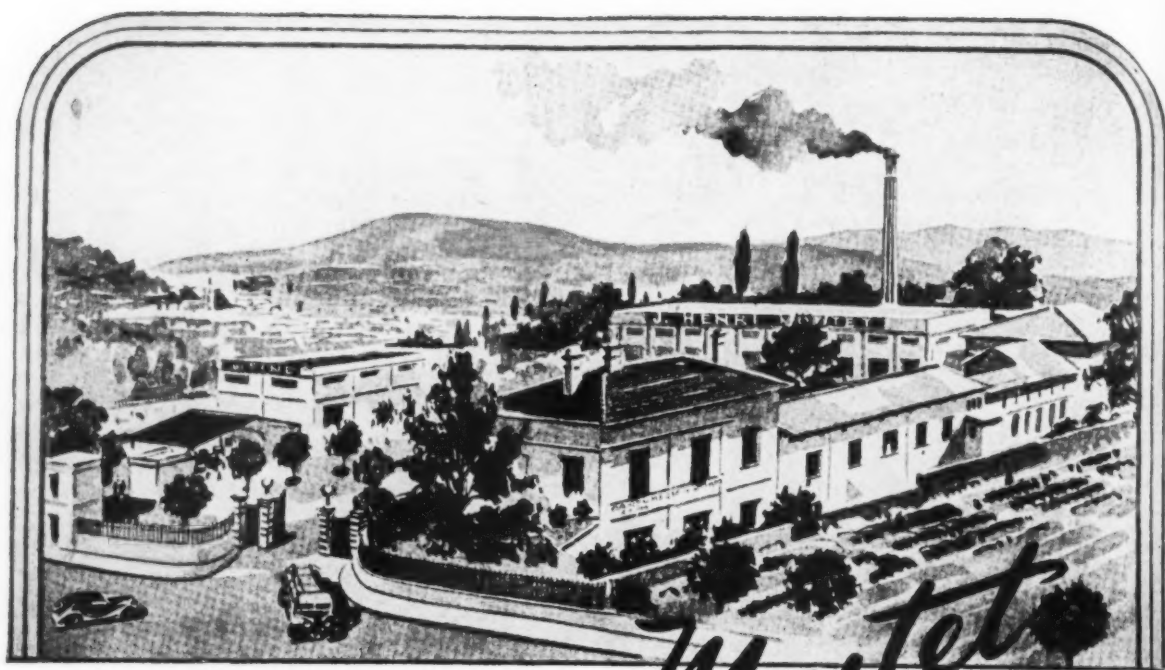
SOAPLESS SOAPS

From 25.5 per cent a year ago, the use of quick sudsing "soapless soaps" has increased to 43.7 per cent this year in Milwaukee. Among families of the highest income bracket, nearly one out of two buy this product, compared with only one in three in the lowest income group. This year, 36 brands were reported by housewives; last year there were six.

Number one position in the chart goes to Dreft with 54.3 per cent, Vel is second with 43.9 per cent and Swerl third with 3.4 per cent. Also listed is Savex with 1.3 per cent.

The increase in family users of quick sudsing products in Omaha is 17.7 per cent since 1946, reflecting a use of these products by 67,408 families. This is an increase of 14,408 families over 1946.

The number of brands has decreased about 50 per cent, from 39 to 18. Dreft is first with 74.0 per cent and Vel is second with 36.2 per cent.



J. Henri Moutet

USINE ST. CLAUDE
GRASSE

24

FLOWER OILS · ESSENTIAL OILS & AROMATICS
SOAP · PERFUMERY · COSMETIC & ALLIED TRADES

Laboratories, Distilleries & Head Offices: GRASSE · A. M. FRANCE





WASHINGTON PANORAMA

by ARNOLD KRUCKMAN

IT will be recalled that at the Toiletries Trade Practice Conference in New York, the Chairman, Commissioner Robert E. Freer, started proceedings by making clear that the Federal Trade Commission is not vested with authority to modify or alter the law made by Congress. He stressed that the Federal Trade Commission law, as well as other laws which the Commission administers, are hard and fast so far as the duty of the Commission itself is concerned. Apparently the statement was designed to set the keynote to limit any discussions involving changes desired by the industry. Freer's statement is now particularly important in the light of the debate which has arisen, and which apparently has had some informal contributions from sources within the Federal Trade Commission.

FEDERAL TRADE COMMISSION

There seems no doubt that there are persons in the Federal Trade Commission personnel—not members of the Commission itself—who are inclined to the view that there is virtue in some of the complaints in the industry that it will be difficult to make some phases of the law work in connection with trade practices in the toiletries, perfume and cosmetic industry. This situation is probably the reason why the public presentation of the trade practice regulations has been delayed by the Trade Practice Division of the FTC. It will be remembered the proposed regulations were deferred by the Commission, ostensibly at the request of the industry, until the vacation season was over. It was said the proposed regulations would be issued early in September.

This is written the last day of September, and there is not yet any indication when the regulations may be given to the public for examination and consideration. Presumably they will be issued some time in October. Actually no one knows when the regulations may be promulgated. It is the custom that they must be issued at least two weeks before the public hearing which is finally held in the Capital. It is assumed in the Capital that if the regulations are published in October, the hearing will not be held until the last week in October, or in November.

There seems little doubt that changes in the present law are necessary to help the Commission and the industry to shape workable trade practices. The Federal Trade Commission members themselves take the position that it is their business to administer the law as it is given to them

by the Congress. If there are reasons why the law must be changed the official attitude is that any modifications must be obtained on the initiative of the industry. The Federal Trade Commission itself is part of the Government, and has no business to change laws. The citizen, who is at interest, presumably may either secure the modification by litigation in the Courts, with the subsequent rulings; or, the citizen may ask the Congress to make the changes by amending the existing law.

There is a very definite feeling here that Congress should be asked to amend the law under which the trade practices regulations for the toiletries industry must be drafted. Apparently the hitch concerns who will do what and when. It is even more apparent that the Federal Trade Commission is not apt to move, although modification by amendment would probably have its blessings if the start is made elsewhere. In that case, the Commission would be called in to advise and counsel the appropriate Congressional Committee, and would write the amended law in cooperation with the industry. Until the industry itself, as an aggregation of citizens, makes the start with Congress, it seems doubtful there will be action. And lack of action is apt to result in more eventual enforcement by the Commission.

ADVERTISING DRUGS AND COSMETICS

On September 2nd the Federal Trade Commission issued the following statement of interest to the cosmetics industry:

"The Federal Trade Commission on December 11, 1946, announced that 'in the case of advertisements of food, drugs, cosmetics, or devices which are false because of failure to reveal facts material in the light of the advertising representations made or material with respect to the consequences which may result from the use of the commodity, it is the policy of the Commission to proceed only when the resulting dangers may be serious or the public health may be impaired, and in such cases to require that appropriate disclosure of the facts be made in the advertising.'

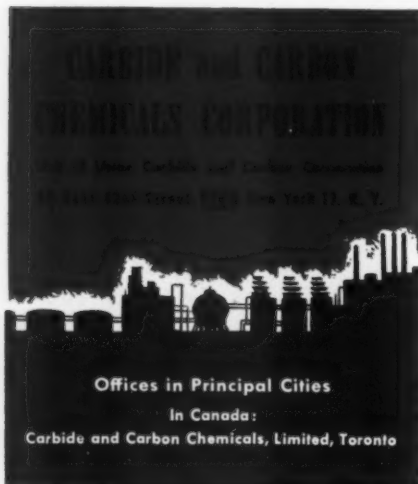
"In line with this policy the Commission has considered the remedy to be applied generally with respect to certain classes of drugs and cosmetics, under Section 12 of the Federal Trade Commission Act, and has determined that it will not require disclosure in advertising that under certain conditions injury may result from the use of laxa-

CARBOWAX Compounds + water =

Put Water to Work

WATER solutions of "Carbowax" compounds serve as lubricants for household and industrial laundry products—as cream vehicles for pharmaceutical and cosmetic formulations—dispersants for aqueous paints and polishes—and as solvents for insecticides and dyestuffs.

These solid polyethylene glycols are bland—vary in solidity from soft to hard—highly water-soluble—do not deteriorate—and range in molecular weight from 1,000 to 6,000. Different "Carbowax" compounds can be blended to permit exacting selection for a specific requirement.



"Carbowax" Compounds Successfully Serve As:

Vehicle and Binding Agent for: synthetic detergent cakes—plant hormones—insecticides and herbicides—cosmetic stick perfumes—buffing compounds—crayons—ink remover sticks—polishes—creams.

Lubricant for: starch sizing—plastic molding—calendering of paper and textile resin coatings—ceramic bodies—metal extrusion.

Plasticizer and Softener for: polyvinyl alcohol—water-soluble gums—rayon finishes.

Dispersant for: proteins—pigments—starch and oxidized starch.

Our product development group will be glad to assist you in working out formulations and applications for your product or process. A booklet—Form 4772—which includes suggested formulations and detailed information on the uses of "Carbowax" compounds is available on request. When writing for your copy, please address Department "G-10."

"Carbowax" is a registered trade-mark of C. & C. C. C.

tives, preparations containing not in excess of 5% of ammoniated mercury, preparations containing iodides, or preparations containing acetophenetidin, unless scientific information becomes more specific as to substantial injury."

The statement is significant in many directions. It seems clear the Commission is much more susceptible to definitive reasoning by industries that have heretofore been hurt by arbitrary assumptions, not warranted by existing facts and knowledge. The statement is considered more or less of a milestone.

PROMOTING WORLD TRADE

The Office of International Trade recently sent abroad Jacques Kunstenaar, its specialist on international trade fairs and exhibitions. In making the announcement it pointed out that the only trade fair which is scheduled to be held on the American continent is programmed in Toronto, June, 1948. The Department of Commerce itself regards the trade fair as an important means of promoting world trade; it holds that Americans should participate in international trade fairs as exhibitors and buyers as a means of materially expanding the exports of the United States and imports of desirable merchandise; the Government intends to set up booths at all international trade fairs; and it urges the development of domestic trade fairs which might eventually be expanded into international trade fairs.

The Department of Commerce each month issues a statistical report showing imports of a list of 40 essential oils. The latest report reveals that the aggregate imports of oils in July totalled 502,820 pounds against 323,073 pounds in June. Outstanding increases were in bois de rose, 10,204 pounds against 2,027 pounds in June; cassia, 10,500 pounds, against 840 pounds in June; cedar leaf, 2,582 pounds, against 1,256 pounds in June; eucalyptus, 47,177 pounds, against 38,270 pounds in June; lemongrass, 92,805 pounds, against 46,087 pounds in June; orange, 1,758 pounds, against 60 pounds in June; petit-grain, 30,396 pounds, against 5,016 pounds in June; vetiver, 4,500 pounds, against 2,470 pounds in June. For the first seven months of the year there was a decrease of 18% in the total aggregate of essential oil imports in contrast to the same period in 1946. The total in 1946 was 4,367,974 pounds; in 1947, 3,562,962 pounds.

Marian Drake Hall, of the Chemical and Drug Section, Department of Commerce, is authority for the statement that last year consumers purchased face powder to the extent of \$72,390,000; lipsticks, \$28,080,000, an all-time high; there was no data available on rouges. The same lady reports that shaving preparations have developed into big business, sales in 1946 totalling \$23,000,000 for shaving creams alone. The retail sales of shave lotions were estimated at \$8,000,000 for 1946; talcum, \$2,000,000; and styptic pencils, \$500,000. She reports exports of shaving creams and soaps for 1946 at \$1,047,540, the greatest proportion going to Europe, to the extent of a value of \$418,000. Latin America bought to the value of \$175,995; Asia, \$152,699; and Africa, \$279,374.

Department of Commerce reports that Madagascar has exported 30 metric tons of clove oil this year. Its export of ylang-ylang has thus far totalled 22 metric tons. It sent us 1,717 kilograms clove oil; 88 kilograms lemongrass; 83 kilograms ylang-ylang, and 5 kilograms of other essen-

tial oils. From Paraguay there has come during the first six months of the year 27,463 kilograms of petitgrain.

South Africa reports state that competition from the United States and Britain, as well as France, have caused six cosmetic factories in the Transvaal to close down. The Seychelles Islands recently have sent us 2,903 pounds of patchouli oil. From Australia there have come substantial increases in eucalyptus oil. Rose oil from Bulgaria has decreased two-thirds in production since last year. Spanish essential oils have again reached pre-war levels, according to latest reports. Those recently received include cade; fennel; juniper; lavender; spike lavender; orange-flower; pennyroyal; rosemary; rue; sage; and thyme. New Zealand has recently sent us approximately \$100,000 worth of essential oils. From Hong Kong we recently received large quantities of cassia, aniseed, camphor, and ho oils. Also there were shipped from the same place 8 pounds of ambergris, and 237 pounds of musk to the United States.

LEMONGRASS CULTIVATION IN TRINIDAD

It is reported from South America that there has been an unusual development in the cultivation of lemongrass in Trinidad, British West Indies. The yield of oil has been highly satisfactory, and it has been found that the plant can be grown in areas otherwise unproductive. Commerce Department also has an interesting report on the rose industry in Bulgaria. It is now, as we know, a complete Government monopoly under national control. The 24 plants are operated solely by the Government which conducts all sales of the oil. Frost and drought, and other reasons not cited, have reduced current production to one-seventh of the normal output. The rose gardens have dwindled to less than a third of those in existence in 1939. It is not thought that the immediate outlook for the rose-oil industry of Bulgaria is very optimistic. Large stocks of the oil, and competition of synthetics, are regarded as vital factors in the gloomy future. Practically no new rose bushes have been planted in recent years, and old gardens have been abandoned. It is interesting to learn that rose bushes exported from Bulgaria to the Russian Caucasus and Russian Crimea, which has caused a large development in those regions, is regarded as the reason which will further deplete the Bulgarian market for rose oils. The Turkish production is currently regarded as negligible.

GERMAN CHEMICAL DEVELOPMENTS

The Office of Technical Services, Department of Commerce, reports the publication of a new study on German chemical developments in emulsifying agents as used in the soap industry. The report contains a general discussion of the German emulsifiers. It is known as PB-3867, and is obtained from the Office of Technical Services, Department of Commerce, Washington 25, D. C.

The Lanham Act, which provides for the new regulations to administer trademark affairs, is now under the direction of another U. S. Patent Commissioner. Casper W. Ooms resigned during September, going back to private practice, and was succeeded by Lawrence B. Kingsland, who comes from St. Louis. Mr. Kingsland, who is 63, has been a patent lawyer most of his adult life. For a short period he was advisor to the Philippine Government, and later was on one of the advisory boards of the Department of Commerce.

NEW PRODUCTS AND PROCESSES

Capping Machine

Tite-Cap Machine Co., Inc., is offering a single-head, fully automatic screw capper. Since the operation is straight line the danger of shaking and spilling is eliminated.

The machine will handle about 60 containers per minute. It is equipped with an adjustable speed arrangement so that the output can be reduced according to need. An extra large hopper is supplied, requiring a minimum of attention. An adjustable tension device controls the tightening of the caps. Alemite grease cups lubricate all moving parts.



Automatic screw capper

A New Glycol

A new glycol, 2-methyl-1,3, pentanediol, a dihydric alcohol, is now being offered by the Celanese Chemical Corp.

Containing one primary and one secondary hydroxy group, Celanese methyl-pentanediol is said to have unusual solubility for a wide variety of resins and is miscible with most common organic solvents. It has a boiling point of 215 deg. C.

Spermaceti Standard

The Toilet Goods Association's Board of Standards has issued standards for spermaceti. Spermaceti is defined as a white, slightly unctuous, waxy substance, having a pearly luster and crystalline fracture, obtained from the head of the sperm whale.

Standards given are: Odor, very faint characteristic odor with no suggestion of rancidity: Solubility, soluble in ether, chloroform and boiling ethanol: Melting point, 44 deg. C. to 50 deg. C. (U.S. Pharmacopoeia XIII, page 667): Paraffin and Free Acids, meets test requirements (U.S.P. XIII, page 512): Saponification value, 124 to 129 (U.S.P. XIII, page 647): Iodine value, 3.5 maximum (U.S.P. XIII, page 647): Acid number, 0.1 maximum T.G.A. Method No. 27.

T.G.A. Method No. 27 is given as follows: Accurately weigh approximately 10 grams of the sample in a

tared 250 ml. Erlenmeyer flask. Add 150 ml. neutral alcohol and heat on the steam bath and stir until sample has dissolved. Add 2 or 3 drops of phenolphthalein indicator solution and titrate while hot with N/10 potassium hydroxide solution to a pink color that persists for 30 seconds.

$$\frac{\text{ml. N/10 KOH} \times 5.61}{\text{weight of sample}} = \text{Acid Number}$$

New Label Adhesive

National Adhesives offers a new bottle-labeling adhesive, Resyn Adhesive 3045, which is said to be highly resistant to both water and humidity.

The product is of medium consistency and is suitable for semi-automatic labeling machines, as well as for hand labeling. It has also been run on some fully automatic machines. White in color, the adhesive dries to a transparent film, without trace of a yellow tint.

Measurement of Gel Strength

An improved method for the measurement of the tensile strength of gels has been developed by W. J. Hamer of the National Bureau of Standards.

In the procedure, a brass disc is suspended in a beaker containing the gel by means of a wire attached to one beam of a balance. An ad-

justable platform over the balance pan supports the beaker. The gel is covered with liquid petrolatum to prevent "skin" formation. Mercury is added at a constant rate to a container at the other end of the balance. As the mercury is added, the height of the platform is changed manually, so that the pointer of the balance is kept at zero. A vertical scale indicating the height of the platform is read frequently until the gel is broken.

The weight of mercury required to produce a fracture in the gel, divided by the area of the brass disc gives the strength of the gel in grams per square centimeter. The rate of change in height of the adjustable platform gives an indication of the resistance of the gel to deformation.

New Catalogs

A new and completely revised edition of the booklet, "Solvent Recovery by the 'Columbia' Activated Carbon System," has been published by Carbide and Carbon Chemicals Corp. This 36-page booklet contains complete information on solvent recovery and other applications of activated carbon. Detailed explanations of how solvent recovery systems work, what equipment is used, the costs of operation and recommended industrial applications are included.

The 85th annual edition of *The Custom House Guide* has been published. The 1,620-page guide contains an alphabetical index of 30,000 commodities and their custom rates of duty (including Reciprocal Trade Agreement rates), as well as Customs regulations; the Internal Revenue Code; port activities, facilities, and charges; and a directory for shippers and those in allied trades. General information places all sorts of necessary data at the fingertips of importers and exporters. A monthly supplement is also published covering the latest laws, regulations, trade agreements, etc. The price, including monthly bulletins, is \$20.00.

The American Perfumer



A compendium of significant news and views

Harold Hutchins says . . .

TIME DOESN'T MARCH ON!

An advertisement by William Hammond announces with extreme pleasure to the ladies of fashionable New York City that, during his absence from the city, he has made every exertion in preparing a handsome assortment of Ornamental Hair Work, requisite for the Toilet. A variety of large curls for the neck, double-sized bunches for the face, Fritzettas, English fronts, fashionable wigs, Toupees, and Hair bands (as a substitute for long hair). Hair cut as usual in a superior style. Razors set to suit the feelings of the face, and at the shortest notice. Address of this noted establishment—574 Pearl Street. This interesting piece of copy was submitted by our good friend, Herman Goodman, M.D., who found it in his search in dermatologic and cosmetic history. Dr. Goodman asks that we do not bill Hairdresser Hammond at regular American Perfumer advertising rates, because that noted establishment was in business exactly 125 years ago.

GIVE AND TAKE

The people of the United States are paying out millions of dollars extra a year for goods which could be produced more efficiently and cheaply abroad, according to a new two-reel documentary film recently premiered in New York City by the Twentieth Century Fund which produced the film. The film's theme is best summed up by an engineer, whose train is the point of departure for the picture, when he says: "This foreign trade is like a round-trip—it works best when there's a full load coming and going." Dr. Winfield W. Riefler of the Institute of Advanced Study, Princeton, who is starred in

the film, states that "These are the things we should make up our mind to import, and concentrate our efforts on agricultural and industrial products that we can turn out more efficiently than anyone else." The Fund intends to give wide showing to the film, which is titled "Round Trip: The U. S. A. in World Trade," through neighborhood movies, as well as an intensive 16 mm. release through a network of distributors. The Twentieth Century Fund is located at 330 West 42nd Street, New York City, and will be glad to co-operate with manufacturers who might be interested in obtaining further information on the film for showing.

FOR A BETTER WORLD

Freedom to profit is what impels the enterpriser to try to produce a better product than his competitor. It drives people into never-ceasing effort to surpass other people in giving the consumers and users what they want, when they want it, and at a price they can pay. Profits will be the motivation—and the means—by which plants will be built, tools will be made, products will be invented and developed, and jobs provided.

XMAS SALES LOOK GOOD

September saw a turn for the better in the sales of toilet goods to retailers for the Xmas Season with a substantial increase chalked up for the month. Cautious buyers seemed to have let down their resistance and bought freely of boxed sets, particularly those in the under-\$10-class. This indicates an anticipated demand of low-priced sets, rather than the de-luxe ones.

VOTES NEW SURVEY FUNDS

An additional \$66,600 has been voted by the Board of Directors of the American Foundation for Pharmaceutical Education for a continuing nation-wide survey of pharmaceutical education, with special reference to the modern practices and services required of pharmaceutical graduates according to Dr. E. L. Newcomb, secretary. Total cost of the survey, to date, amounting to \$163,100, has been underwritten by the Foundation. It has been conducted under the auspices of the American Council on Education, since the proposal was first initiated in May, 1946, by the American Association of Colleges of Pharmacy. In announcing the new grant, Dr. Newcomb stated that \$39,000 had been allocated to complete the study, and \$27,600 would be used to implement the research. Results of the study are expected to be completed by July 1, 1948. Between then and July 1, 1949, a resume will be brought to the attention of administrative groups of all colleges of pharmacy and universities of which the colleges may be a part. Immediate direction of the study is in the hands of Dr. Edward C. Elliot, former president of Purdue University.

DRUG BUSINESS GOOD

Sales of drug wholesalers in July, including liquor, reached \$9,000,000, which is an increase of 6 per cent over last June, and about the same as July of last year. Sales by drug stores hit a new high at \$3,725,000, 000 annually, which the "News Capsule," issued weekly by the Federal Wholesale Druggists Association, says is not likely to dip below \$3,425,000,000 in 1948.

*Crystal clear,
sparkling bright
Maryland
Glass...*

**SMARTLY
STYLED
FOR SALES**

WRITE TODAY . . . tell us the nature of your product and the sizes in which it is packed . . . and let us send samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, talk with us about creating a special design for your exclusive use. Drop us a line today.



pack to attract

in MARYLAND GLASS

MARYLAND GLASS CORPORATION, BALTIMORE 30, MARYLAND
CHICAGO: Berman Bros., Inc., 1501 Laflin St. . . . CINCINNATI: J. E. McLaughlin,
401 Lock St. . . . JERSEY CITY: Maryland Glass Corp., 50 Journal Sq. . . .
KANSAS CITY: Aller Todd, 1101 Mulberry St. . . . MEMPHIS: S. Walter Scott,
608 McCall Bldg. . . . ST. LOUIS: H. A. Baumstark, 4030 Chouteau Ave. . . .
SAN FRANCISCO: Owens-Illinois Glass Co., Pacific Coast Division, 320 California St.

COSMETIC PRICES KEPT DOWN

The National Association of Chain Drug Stores has just completed an exhaustive study which indicates the prices of cosmetic and drug products have not risen appreciably since 1939. As a matter of fact, the survey indicates that 4,299 drug items—all on fair trade—have risen but 5.36 per cent in price from 1939 to 1947, while 455 vitamin products have dropped 32.52 per cent in price between 1939 and 1947. On 7,334 fair trade items studied, consumers pay only 1.39 per cent more today than in 1939. The price of 2,260 items had increased, 697 had decreased, and 4,377 items registered no change at all.

WARNER SELLS RAYMOND

William R. Warner Co. has sold Raymond Laboratories to a group of 25 employees, headed by Karl L. Arend, after owning the concern since September, 1946. Warner will keep the trade name, "Rayve," while Raymond will use "Rayette" and "New Ray" on its professional products. Raymond Lee, who founded the company in 1935, and Raymond Reed, a former executive of Raymond, will remain with the Warner Co.

FIRST POST-WAR SHOW

The New York Pharmaceutical Association will sponsor its first drug show since the war, in cooperation with drug and cosmetic manufacturers and wholesalers. The show will be held October 27-29, at the Hotel Pennsylvania, high-lighted by a sales clinic.

\$1500 PRIZE CONTEST

The National Association of Wholesalers has announced a \$1500 prize award contest for outstanding articles of about 5,000 words dealing with the subject of wholesaling, or some specific phase of wholesaling, as it pertains to distribution. The contest ends on October 30th, 1947.

AFTER MORE VOLUME

The recent slump in the sale of cosmetics by department stores has set them to roaming all over the merchandising front in an effort to tap new sources of business in order to bolster up the sagging cosmetic front. Among the more pronounced efforts are the issuance of greater numbers of catalogs, an extension of telephone service, a resumption of outside selling in a small way, use of out-of-town newspapers and big circulation na-

tional magazines, and other ideas designed to increase this go-get-it-type-of-business. The future of the department store, reports "Retail Grey Matter," is its ability to grow into either a sectional or national institution. That, it adds, can be accomplished only by boldly exploring all known, and some not-too-well-known, methods of hitting more and more potential customers.

HIGH COST OF LIVING

The high cost of living is becoming the dominant single interest of the American people, reports a New York firm of industrial consultants, who say that it will be a continuing threat to the Administration's foreign policy and a constant warning of a depression in the making. Workers for salary or wage and those living on invested income are not at present driving up the cost of living. It is the sustained buying of the families of business and professional men and farmers that has supported the more recent upsurge in living costs, points out these economic experts.

NEW MARKETING MAP

The location of over 750 buying headquarters for 5,700 chain drug stores is shown on a new marketing map recently issued by Chain Store Age of New York City. The map also shows the number of stores that are operated by the drug chains in 207 principal cities; total sales with a breakdown of sales by department, and other valuable statistical data.

LEVER RAISES SALARIES

Charles Luckman, president of Lever Brothers Co., recently announced pay rises for 3,000 employees in five of their plants, including the Pepsodent Division, that will average 12½¢ an hour. This represents their third wage increase in 18 months' time.

STOCK HEADS DCAT

The Drug, Chemical and Allied Trades Section of the New York Board of Trade (DCAT), composed of over 700 manufacturers, met at Shawnee-on Delaware, September 24-26, and elected the following officers for the next fiscal year: Fred J. Stock, vice-president of Chas. Pfizer & Co., chairman; Robert B. Magnus, of Magnus, Maybee & Reynard, vice chairman; Hugh S. Crosson of McKesson & Robbins, treasurer; Helen L. Booth was re-elected secretary, and Carl M. Anderson, assistant to president, Merck & Co., was re-elected Counsel of the group.

PERSONNEL RE-ALIGNED

A most significant change in American business is the shifting around of top executives, according to a recent survey of presidents, vice-presidents, sales managers and other top men. This shifting about took place within companies, as well as frequent jumps to other companies within an industry. Perhaps no industry has seen as many changes as have been reported in the cosmetic field, during the past six months, by "Drug & Cosmetic News-letter," which specializes in such matters.

NEW BAYER PLANT

The "world's largest and most modern plant devoted exclusively to the manufacture of aspirin," built for the Bayer Co. Div. of Sterling Drug, Inc., was opened last month at Trenton, N. J., at a cost of \$2,500,000. The plant is geared up to produce 60 per cent of America's aspirin tablet requirements, reported James Hill, Jr., president.

SCORES DEPRESSION TALK

Labelling forecasts of an imminent business depression as "the wailings of professional alarmists," E. Allen Newcomb, executive secretary of the National Wholesale Druggists' Association, recently appealed to the pharmaceutical industry for "continued efficiency in distributing health supplies to the American public at prices it can afford."

"NOW FOR TOMORROW"

The new full-color motion picture, "Now For Tomorrow," which has been dedicated to the drug industry, by Owens-Illinois Glass Co., producers of the film, report that it is receiving a hearty reception in Australia where it is now being shown. So far, there have been eight showings of the film in Australia and New Zealand to a total audience of 1,305 druggists and pharmacy students. It is primarily a 20-minute film that presents merchandising techniques to help the pharmacist of tomorrow meet increasing competitive conditions.

MAURELLA ACQUIRES VANDERBILT

Maurice Handman, president of Maurella Co., cosmetic manufacturer, announced last month that his company has absorbed Gloria Vanderbilt Corp., perfumers. Mrs. Vanderbilt will remain active in the management of the company, but has sold her salon on Sixtieth Street in New York City to Maritime Express, Ltd.

ADOPTS AMENDMENT

B. R. Armour, president of Heyden Chemical Corp., recently announced that a special meeting of stockholders had been held, at which time they adopted an amendment to the Corporation's Certificate of Incorporation providing for the creation of a new class of sixty thousand shares of second preferred stock without par value.

ANNOUNCE NATIONAL CAMPAIGN

Shulton, Inc., creators of Early American Old Spice and Early American Friendship's Garden toiletries for women, Early American Old Spice for men, and Leigh Perfumes, announces a national advertising campaign to run from December 7th to 14th, in 87 newspapers, to supplement department and drug store Christmas promotion of Early American Old Spice Perfume Bell.

TRAGIC FIRE

With the deepest regret, Merck & Co. last month announced the death of two of their Rahway, N. J., engineers: Walter Moll, of the Engineering Department, and Henry Ober, Pilot Plant Process Head. They died of burns received in a flash fire which occurred while a group was conducting a safety test to ensure safe manufacturing methods on a relatively new product, sodium hydride. Five other men were injured at the same time, but they are all on the road to recovery.

RELEASE BROCHURE

Packaging Institute, 342 Madison Avenue, New York City, has released an interesting brochure that sets forth the reasons for the formation of the Institute, along with a novel listing of its various officers and committees, and how the organization can be of service to anyone in the packaging field.

ABOUT GERMAN CHEMICALS

Edward Rosenthal, vice president of Glyco Products and recently returned from a visit to Germany, states that American Manufacturers could capture most of the European chemical markets, formerly held by the German cartels, if it were not for the difficulties of foreign exchange. Europe requires vast supplies of chemicals and the drastic shortages in most lines are a key factor in retarding the pace of rehabilitation. In the meantime, European chemical manufacturers are working at

full capacity of their facilities, many of which were damaged during the war. The German plants, especially the I. G. Farben, are operating at a surprisingly high production rate under American and British control.

NEW APPOINTMENT

Lentheric, Inc., have appointed Robert Otto & Associates, Inc. for export advertising, effective last month. A new intensive campaign featuring Lentheric's Perfumes, Bouquets and Men's Toiletries is being released in Latin America. Four color and black and white page advertisements will be used in magazines, with 400 and 200-line copy appearing in newspapers.

WINTHROP-STEARN'S MERGER

Formation of Winthrop-Stearns, Inc. as a new subsidiary to integrate the major pharmaceutical interests in the United States of the parent company was announced last month by James Hill, Jr., president. The new company will conduct the business hitherto carried on by the two companies. A similar company will also be formed in Canada, as soon as the legal requirements are completed.

TIPS FOR WRITERS

The Coca-Cola Co. has recently issued a booklet on "Highlights from the Lanham act for Editors, Writers, Publishers and Advertisers," stressing the importance of recognized trade marks to the American way of life, and why it is important to really mean their product, known as either "Coke" or "Coca-Cola," whenever written, rather than using the terms indiscriminately for any cola drinks.

NEW PRODUCTION METHOD

An improved process expected to increase materially production of propyl gallate is under development at the Heyden Chemical Corporation's plant at Garfield, N. J. At the same time, the company's research division is investigating gallic acid esters of higher fatty alcohols. Propyl gallate is the chemical which has been announced as being an antioxidant to prevent or retard rancidity lard and other edible fats and oils.

SELLS INTERESTS

Northam Warren, head of the corporation bearing his name, manufacturers of Cutex, Odorono and Peggy Sage, has sold his holdings in Air Radio, Inc., to J. B. Cobrain, former treasurer of Northam Warren.

BEAUTY BOWL

One of the high-spots in the new drug store recently opened by Rexall Drug Co. in Los Angeles, which is the largest drug store in the world, is the "Beauty Bowl." It greets customers just inside the main front entrance of the drug store and is a segmented, circular showcase for the display of cosmetics and perfumes, 24' in diameter. The bar is divided into 17 sections or separate display cases. Each case will carry an individual and entire line of name cosmetics. Plans are now being considered for periodic rotation of these cosmetics in a clock-wise manner to make a complete revolution of the bar, so that manufacturers can have no cause to complain about the preferred location of another product over his own. In the center of the circular bar is a smaller segmental case with 17 storage bins for reserve stock and display use.

TELEVISION REQUIRES BEAUTY

Be beautiful and you may televise, is the dictum of Alice Keith, president of the National Academy of Broadcasting in Washington, D. C., who says radio stations should require their personnel to patronize beauty shops. And that applies to men as well as women, she adds. Women who are already in radio, she believes, will be the first ones drawn upon for television if—and it's a big if—they have kept their figures, studied their best hair-do and make-up, and learned to move gracefully.

ENTERTAIN HOMEMAKERS

Richard Hudnut Sales, along with ten other clients of the Kenyon & Eckhardt Advertising Agency of New York City, entertained 600 newly married homemakers at a special school for brides, at Gimbels in Philadelphia, last month. A comedy skit was presented to show how a DuBarry "En Route" Kit was used by a fussed bride, during her first and hectic days of homemaking, to help keep her fresh as a dew drop. The cosmetic department of Gimbel's devoted an entire display to the DuBarry Kit, which was used in the promotion.

FASHION & BEAUTY PREVIEW

Last month, on the Fashion Floor of her New York Salon, Elizabeth Arden previewed her Fall '47 collection of Custom Order fashions, designed by Castillo, as well as two new Elizabeth Arden Fall make-up colors, called Desert Pink and Red Cactus.

BRIGHTER TEETH

Teeth can be polished $2\frac{1}{2}$ to $5\frac{1}{2}$ times brighter than heretofore through a novel application of micro-chemistry developed after more than three years of research in the Sterling-Winthrop Research Institute, at Rensselaer, N. Y. A new tooth paste, Lyons, incorporating this new discovery, was placed on the market early this month.

MORE HYDROQUINONES

Tennessee Eastman Corp., Kingsport, Tenn., is now making available in commercial quantities a number of hydroquinone derivatives which until recently were obtainable only in laboratory amounts. The product is well known as an antioxidant and stabilizing agent for preventing deterioration of fats, oils and resin monomers.

MUCHOS PESOS

Employees of the Parker Pen Co. received 40 per cent of their September 19th salary in Mexican pesos in order to drive home the significance of foreign trade to employees of the company, stated Kenneth Parker, president of Parker.

CHEMICAL EXHIBIT

The exhibit of U. S. Industrial Chemicals, Inc., for the Pacific Chemical Exposition, scheduled for Oct. 21-25 in the Civic Auditorium in San Francisco, features a wide range of U. S. I. chemicals, including industrial alcohols, solvents and synthetic and natural resins.

STEARNS MOVE

Announcement was made last month that the operations of Frederick Stearns & Co., Div. of Sterling Drug, Inc., would be gradually moved between now and Jan. 1st from Detroit to a new plant at Myerstown, Pa.

BETTER BREAD

It's good news to hear that a manufacturer has perfected a new concentrated shortening which cuts bread spoilage from mold. Potentially, it could save the United States over 16,000,000 bushels of wheat a year. This potential savings comes at a time when taxes take on the average of 32¢ from every dollar earned, meaning that the average wage earner is working one day out of three for his local, state and Federal governments, and income tax

reduction is therefore the homemaker's chief hope for food budget relief, since high exports of American foods, plus high production costs will work to prevent any major revision of food prices.

NEW HIGH IN BABIES

A new high of 3,600,000 babies will have been born at the end of 1947, according to an estimate in *My Baby Magazine*. The prediction is projected on the national birth rate increase so far. A record of 3,440,000 births was set last year.

EMPLOYEE BENEFIT PROGRAM

The Mathieson Alkali Works has adopted a comprehensive employee insurance and benefit program to cover all regular employees with more than three months of service. Benefits will be provided at company expense and will include life insurance, non-occupational accident and sickness benefits, hospitalization, special hospital services and surgical benefits.

EDUCATION

Education in any subject has changed with the years. But, it takes too long to become educated, and it has been the tendency of each school to hope against hope that the higher school would instill the education. Pity the fellow who drops in at any low level, or high one either. His education is still ahead of him. And then it is experience—the best school of all. Here are all those ex-GI guys and girls, like my own two sons and daughter-in-law, seeking education. I hope it does them good, because there never was a time when industry needed so many highly trained specialists. In discussing this matter recently with the lady who shares my name, she told me there were three classes of teachers. One class knows how to teach, but has no command of the subject; the second class knows the subject, but has no knowledge of teaching; the third (and very rare) class is the teacher who knows the subject and how to teach it. Incidentally, this lady should know, because she was the youngest school teacher that ever taught in the State of Pennsylvania, having graduated from the East Stroudsburg State Teacher's College at 15 years of age. Since those days, however, she has continued her teaching activities by helping our three children with their home-work. Their high scholastic standings attest to the assistance she has given to them. How sweet the phrase—Those who can, do; those who can't, teach! Maybe it would be a good idea if each school would also

enroll one or both parents, when enrolling a child. The parents would have regular assignments to be at school for instruction (call it consultation) and the teachers would come to know the parents and the parents would come to know the teachers. The pupils would be in a squeeze play. If the parents didn't appear for their class-room work (consultation), the pupil would be suspended from school. This is becoming nostalgic, what with the good old days of the little red school house and the teacher boarding around. But, was that bad?

PURELY PERSONAL

GWEN GIBSON, head of the market research organization bearing her name, 421 Commerce Exchange Bldg., Oklahoma City, Okla., has begun publishing monthly summaries in each of ten cosmetic classifications, covering purchases by brand, price, size, color (or other qualification) and place of purchase. This exclusive cosmetic study, known as "Beauty Buyers," will be based on the yearly reports of 10,000 Oklahoma women. Other markets will be opened, as need arises. Price of the service is \$15 per month, or \$171 per year for 12 reports.

H. HUGH WILLIS, specialist in electronics, has been appointed director of research and development of the Kellex Corp.

ELINOR GUTHRIE McVICKAR has resigned as advertising manager of Dorothy Gray, Ltd., and will join Harriet Hubbard Ayer where she takes over the problems of merchandising, promotion, styling, advertising and product development.

HARLAN HOBBS has been named sales promotion manager of the Kimble Glass Division of Owens-Illinois Glass Co.

JOHN W. HART, vice president of Winthrop Chemical Co., Inc., was in Havana, Cuba, early this month, where he presented the John W. Hart Prize and Diploma to the winning student at the University of Havana.

CHARLES W. DARR, J. HENRY BROWN and JACK EGAN have resigned from Harriet Hubbard Ayer, New York, N. Y.

FREDERICK J. BATES, retired chief of the optics division of the National Bureau of Standards and an authority on sugar chemistry, was honored by chemists and leaders of the industry at a banquet in the Hotel Pennsylvania, Sept. 17.



*Beauty
and the
Best*

Your product in handsome, simple,

gleaming Hazel-Atlas Opal Jars is an unbeatable

combination. It says beauty to the consumer

and sales to the dealer.

HAZEL-ATLAS
GLASS CO.
Wheeling, West Virginia

KENNETH A. BONHAM, president of Emerson Drug, announces final consummation of the sale of Citro Chemical Co. stock (an Emerson subsidiary) to Chas. Pfizer.

L. C. MITCHELL, ex-Northam Warren, takes over the South East for Nestle LeMur.

MILLER S. BURGIN, HENRY J. BASHWINER and J. I. VANDERWATER are new commercial ambassadors for Magnus, Mabee & Reynard.

GEORGE W. MERCK, president of Merck & Co., will receive the '47 Chemical Industry Medal from the American Section of the Society of Chemical Industry.

JULIUS WEINSTEIN has been appointed manager of the New York buying office of Max Factor & Co.

WALTER S. BECKER has been made Middle West representative of the Regent Case Co.

HELENE DU GUAY, ex-dancing teacher, fashion coordinator, cosmetic buyer and sales girl, is Dermetics' newest beauty consultant, in the Eastern area.

GEORGE OLIN WALBRIDGE, 2nd., member of the Racquet & Tennis Club, and promotion director for Elizabeth Arden, was married recently to Mrs. Kathryn Ray Nicoll.

JUSTIN DART, president of Rexall Drug Co., recently lambasted the "Un-American philosophy of seeing how little one can do and how much one can get for nothing."

JOHN WOODLEY, ex-May Co., Tussy and Chen Yu, joins Dermatics to help Ed. Dingman handle West Coast distribution.

Another Dermetics' new face is MILDRED MANN, a Columbia University graduate, who is specializing on the theatre and languages.

JIM GILMOUR is the new personnel manager of Lamont, Corliss and Co.

CLIFFORD WINANS, ex - Don Jaun, goes on syndicate store sales for Colgate-Palmolive-Peet.

PHILLIP C. SMITH, whose father organized the Yardley business in America, and is now vice-president in charge of production, has been elected vice-president of Yardley of London.

E. A. HILDRETH now is sales promotion manager of Owens-Illinois glass container division, succeeding Ken White, who goes to the West Coast.

M. VINCENT O'SHEA, former president of Rosemarie de Paris, candy manufacturers, has been made administrative vice president of Merck & Co.

DR. E. S. BLAKE has been appointed assistant director of research for Monsanto Chemical Co.'s Merimac Division.

HERBERT STORFER, son of Benson Storfer, president of Corday, soloed recently at the White Plains, N. Y., airport. He attends the perfume classes at Columbia University, day and night, along with a full-time job at the Corday headquarters.

ARNOLD H. SMITH, acting managing director of Monsanto (Australia) Pty. Ltd., has been made vice-president and member of the Board of Directors of Monsanto (Canada) Ltd., and will assume his duties January 1, 1948.

LOUIS HERZOG has been named sales manager of Farel Destin, Inc., by the Revlon Products Corporation. He will also continue his duties as assistant sales manager of the Salon Division of Revlon, in which capacity he has served for the past eight years.

ROBERT SINCLAIR has been appointed vice-president of Parfums Hartnell and Parfums Adrian.

DONALD HOPCRAFT has been made sales manager of Dana perfumes.

TERRY QUIMBY has been made director of advertising and store fashion promotion for Helena Rubinstein, according to a recent announcement made by Oscar Kolin, vice president.

W. D. CANADY, vice president in charge of advertising and sales for Lenthéric, Inc., returns from a three-week coast-to-coast business tour of the major markets of the United States, expressing optimism for the perfume and cosmetic business for the balance of the year.

ANNA MAY WONG, noted Chinese actress, spoke on Chinese beauty customs last month at the Plaza Hotel in New York City, in connection with a promotion that Stearn's was staging on Lenthéric's Shanghai Perfume and accessories.

J. H. McSHANE, president of Pacquin, Inc., has announced the resignation of Jack Franz, effective Jan. 1.

WALTER KRISBELL, formerly of Courtley, will represent Ann Haviland in the East.

NATALIE CHERRY, advertising and promotion manager of Wrisley, has resigned to open her own offices.

ARTHUR G. HALFPENNY becomes advertising manager of Northam Warren Corporation.

OTTO H. SOBELL has resigned from Helena Rubinstein and H. R. Laboratories.

A. D. McKELVY takes over Duncan Storm's Cargo Toiletries for Men.

NANCY CRAIG made her regular ABC Network broadcast one day last month from the new Charles of the Ritz Salon and Powder Bar in The Fashion Store in Houston, Texas, after flying down from New York.

MURRAY M. SPITZER has been named assistant advertising manager of Revlon Products Corp. He was formerly advertising manager for the Hecht Co. in New York and had also been associated with Macy's and Gimbel's in an advertising capacity.

SAMUEL SPRING, formerly a research specialist for the Federal Government, has been appointed to the research and development staff of the Pennsylvania Salt Co.

JOHN P. MOSER, formerly a member of the technical staff of Lever Brothers Co., has been named general manager of Harriet Hubbard Ayer, Inc., recently acquired by Lever and to be operated as a separate unit.

HON. CLINTON P. ANDERSON, the Secretary of Agriculture of the United States, will be guest of honor at a dinner to be given by the Mercantile Section of the New York Board of Trade, at the Hotel Commodore, November 20th.

SHIRLEY COOK, ex-John Fred-erics, is the new publicity director of Tussy.

WILLIAM H. ROBERTS, JR., formerly manager of penicillin and streptomycin production for E. R. Squibb & Sons, has been named general plant manager of the Natrium, West Virginia, plant of Glyco Products Company, Inc., leased from the U. S. Government last winter.

Oakmoss Synthetics by Schimmel

Chênene

An Oakmoss synthetic of outstanding stability and fixative power which can be used to replace the absolute either partially or completely.

Resinoid Moussène

A synthetic Oakmoss, true to the characteristics of the natural resinoid. Readily soluble and an excellent fixative.

Crème de Mousse Artificial

This Oakmoss synthetic is an ideal fixing agent for heavy, modern odors. Extremely effective, especially for soaps.



601 West 26th Street, New York 1, New York

THE ROUND TABLE —



Mrs. Frederick Anthony Dormer

Rose Marie de Hoyos Married to Frederick Dormer

Miss Rose Marie de Hoyos, daughter of Mr. and Mrs. Luis de Hoyos, was married last month to Frederick Anthony Dormer, son of John and the late Gladys Dormer. The ceremony, conducted by the Rev. Justin J. Lyons, pastor of St. Peter's Church, at the home of Dr. and Mrs. Sidney Austin, Vacluse Park, was followed by a reception at the Flo-Jean, Port Jervis.

The bride was given in marriage by her father, who is chairman of the Sullivan County Republican Committee, and who, until this year, had served for 12 years as mayor of Monticello. Matron-of-honor was Mrs. Sidney Austin, aunt of the bride, and Raymond Dormer was his brother's best man.

Mrs. Dormer attended Virginia Intermont College and was graduated from Edgewood Park Junior College, in Briarcliff Manor. She is directly descended, on the maternal side, from Abel Upshur, who was President Tyler's Secretary of Navy and later succeeded Daniel Webster as Secretary of State; from the Fairfax, Custis and Parker families of Virginia, the Sturges family of Fairfield,

Conn., and from Dr. Alois von Isakovics. Her paternal grandparents were the late Prof. and Senora Frolian de Hoyos of Santander, Spain.

Mr. Dormer, a veteran of six years in the Coast Guard service, had 22 months of intensive Pacific battle experience. He is a graduate of St. Dennis and Yonkers High School of Commerce, and is presently engaged in technical research in New York.

After a Mexican honeymoon in Fortin, Mexico City, Taxco and Cuernavaca, the couple will reside in Sunnyside, L. I.

Dr. P. C. C. I. Isherwood

Hopeful as to the Outlook

Dr. P. C. C. I. Isherwood, O. B. E., chairman of W. J. Bush & Co., arrived on the Queen Elizabeth in August and passed the month of September in Canada. He plans to spend as much time as possible in the United States before returning to London the latter part of this month. When interviewed by our



Dr. P. C. C. Isherwood

reporter Dr. Isherwood was hopeful as to the outlook. Britain, he said, has always shown great resilience and recuperative powers and he for one was not pessimistic over the future.

Dr. Otto Sobell Resigns

From Helena Rubinstein

Dr. Otto Sobell has resigned from Helena Rubinstein, Inc., and from Helena Rubinstein Laboratories, Inc. He will continue to be actively engaged in his profession. He will be prepared to announce his plans about Dec. 1.



Kay Torrey

Kay Torrey Becomes Beauty Editor of Charm

Kay Torrey, widely known in the field of beauty and cosmetic merchandising, has been appointed beauty editor of *Charm*, effective Oct. 15.

Mrs. Torrey, for many years associate good looks editor of *Women's Home Companion*, and contributing beauty editor to *Holland's* magazine, has been a special consultant for leading cosmetic manufacturers during the past year.

Prior to her work with *Woman's Home Companion*, she had advertising agency production experience with J. Walter Thompson.

She has traveled extensively throughout the United States, making surveys on cosmetic merchandising practices in retail stores, concentrating on sales helps and consumer educational efforts. She is the author of several recent booklets in the field of consumer education and sales training, and beauty articles in *Good Housekeeping* and *Calling All Girls*.

Mrs. Torrey was graduated from Smith College and has traveled throughout the world. She is a member of the Fashion Group of New York.



for PERFUMES
COSMETICS and
SOAPS

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China to Ban Cosmetics

The Minister of Economic Affairs proposes to ban the sale of perfumes, silks, satins, cosmetics, manicure sets, candies, biscuits, rugs, cigarettes and pearls, in China after Jan. 1.

Mr. and Mrs. Dedrick Win Low Net In Westchester Tournament

Alec J. Dedrick, vice-president of van Ameringen-Haebler, Inc., New York, N. Y., with Mrs. Dedrick, won first low prize in the Westchester County Golf Association's "Husband and Wife Tournament" on Sept. 19. At the Leewood Country Club, the Dedricks finished the Alternate Shot Match with 84 minus 13, net 71.

Rupert C. Watson Joins Fleuroma Inc. as Sales Manager

Rupert C. Watson has joined Fleuroma, Inc., 73 Sullivan Street, New York, as sales manager for the company's full line of perfume specialty oils, aromatic chemicals and essential oils.

Mr. Watson brings with him to his new connection a background of more than 20 years of sales adminis-

tration and advertising experience in the essential oil and allied industries. Beginning his career in 1924 with "Drug and Chemical Markets," Mr. Watson was successively with the "Oil, Paint and Drug Reporter"; Ungerer and Co. as salesman and sales manager; and most recently and



Rupert C. Watson Walter Lengsfelder

for the past 12 years as American resident partner and managing director of Firmenich and Co., New York.

At Fleuroma, Inc., Mr. Watson is associated with Walter Lengsfelder and E. Poons, president and treasurer respectively of the organization. Mr. Lengsfelder, with a background of many years as a leading perfumer in the European field has well justi-

fied his reputation here by his many contributions to the increasing number of distinctive American perfume specialties.

Medal Committee Announced by Society of Cosmetic Chemists

President Emil G. Klarmann of the Society of Cosmetic Chemists has announced the formation of a "medal committee" whose duty it shall be to designate the member of the Society who has made the most outstanding contribution to cosmetic chemistry, technology or related activity. The award is to be made annually at the December meeting.

Dr. Curt Wimmer is chairman of the committee. The other members will be representatives of the leading trade journals and of The Toilet Goods Association. Representatives are: Maison G. deNavarre, for The American Perfumer; Dr. D. F. Chichester, for Drug Trade News; T. S. Farrell for Drug and Cosmetic Industry and H. Goulden for The Toilet Goods Association.

Dr. Klarmann has requested the committee to have ready for presentation a suitable design for the medal at the next meeting of the Society, at the Biltmore Hotel, Dec. 3.

SCARAT FOR RATS

Its ODOR Terrifies!
Its TASTE Disgusts!
Its EATING "Kills"!

IMMUNIZE Bagging, Boxes, Cartons, Bins and other Vulnerable Containers against Rodents.

MIX SCARAT in Soya-Bean and Vegetable Plastics to protect them from hungry Marauders.

PAINT it on Wood and Wall Board to keep Vermin from Buildings.

Harmless to Human Beings, Pets and Domestic Animals.

USE SCARAT
FREELY

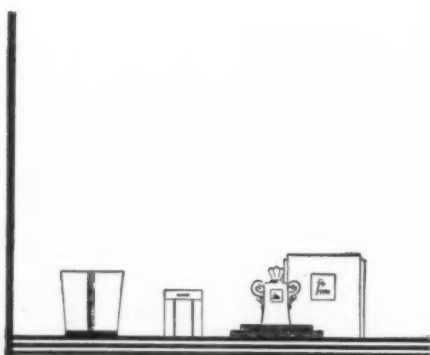
Made under laboratory control and tested to conform to highest standards of strength and potency.

Results assured by careful check of quality.

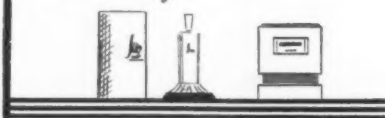
A BOON to the PEST CONTROL Profession for STARVING out Rodents.

Invaluable for Warehouses, Food Storage Buildings, Institutions, Food Processing Plants and Cereal Factories. Also for use in Private Homes.

SPRINKLE CO.
SPARKILL :: NEW YORK
PEST CONTROL DEPARTMENT



there is no finer



cosmetic container



than a Karl Voss box.

Karl Voss Corporation
HOBOKEN NEW JERSEY

HILARY SAYS:

JASMIN!—But *absolutely* **ABSOLUTE!** Nary a fly in the ointment,—or even an honest sweat drop in the brew. I'm a-tellin'-ya—because: I extracted it myself in Grasse, France,—by the Cresp Martinenq volatile-solvent process.

ITS fine, unadulterated purity is its own trademark. Mark my word.

BEFORE the extracting takes place, there's a little preliminary business going on. Before the sun rises, the Grasse families: gran' ma, gran' pa, papa, mama and every walking member of the third generation proceed into the Jasmin Acres. From 4:30 A.M. to 9:30 A.M. the Jasmin blossoms are picked. "The oily boid might get woimy,"—but hot sun must not strike Jasmin blooms,—if they're headed for a Perfume Bottle.

IT takes about four million flowers to make one pint of Jasmin Absolute. Approximately nine million flowers are needed for one kilo. The "Blössom Basket" (a little larger and flatter than our ordinary wash-basket) holds twelve kilos. To pick three kilos, generally, takes one person eight hours;—so it requires four people and a "whole" working-day to fill a "Blossom Basket,"—(with office hours only 4:30 A.M. to 9:30 A.M.)

I'M quick on the "Pick-Up."—But that's a lot of picking. You have to be a Fast Worker for that Pick-Up, too!

MONEY—m a t t e r s ! The pickers get paid 260 francs per kilo. Officially, 120 francs buy one dollar;—but 120 francs do not buy in France what one dollar will buy in this country.—And living in France is not "done with mirrors,"—except sometimes.

HAVE you worked with "Jasmin Absolute" before? Well,—then Y O U be the judge. Smell for yourself!—I'll sell.

J. HILARY HERCHELROTH

representing

Cresp Martinenq
369 Third Avenue

Established 1782

Grasse, France
New York 16, N. Y.

In Havana Lainz y Cia Aguilar 615

Prof. Ruzicka Celebrates His 60th Birthday

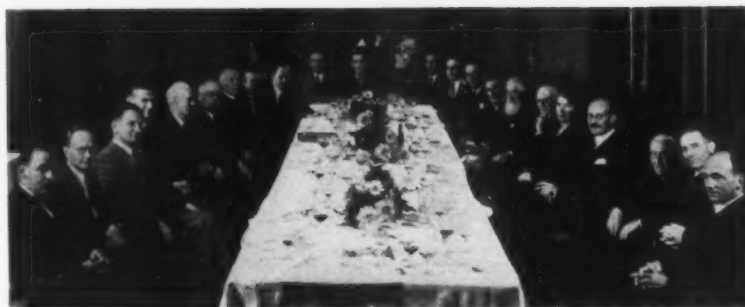
Firmenich & Co., formerly Chuit, Naef & Co., organized a dinner on Aug. 29 at the Hotel des Bergues, Geneva, to celebrate the 60th birthday of its scientific collaborator, Prof. L. Ruzicka, winner of the Nobel Prize for Chemistry in 1939.

The management of Firmenich & Co. offered their best wishes to Prof. Ruzicka, and Prof. Thierry added those of Geneva University. Dr. Hartmann, managing director of Ciba, presented to the scientist a collection of heretofore unpublished scientific works (currently published in his honor) on behalf of the Swiss Chemical Society, and in the name of his principal collaborators.

Prof. Briner of the Geneva School of Chemistry, and Prof. Fichter, president of the editorial committee of the *Helvetica Chimica Acta*, also made speeches.

Commercial Chemical Development Association Announces Meetings

Plans to hold two important meetings of the Commercial Chemical Development Association have been announced. According to Program



The dinner tended to Prof. Ruzicka coincided with the 127th Congress of the Swiss Society of Natural Science and many representatives of Swiss scientific and industrial centers were present.

Chairman, Dr. James H. Boyd, the Fall meeting has been set for Oct. 28, in Cleveland and is under the local chairmanship of Robert H. Kittner. A March meeting is also assured.

The following are the elected officers of the association: Dr. L. B. Hitchcock, president; L. H. Fleet, vice-president; C. D. Goodale, treasurer; A. J. Fisher, Jr., executive secretary. Directors are: Dr. W. H. Bowman, W. H. Harding, H. E. Autcault and J. J. Schaefer.

The association is concerned with the problems and marketing of new chemicals and the problems of expanding the market for manufactured chemicals.

Chemical Exposition to Feature New Developments

Post-war progress in chemically controlled industries will be a significant feature that will be reflected in the exhibits at the 21st Exposition of Chemical Industries at the Grand Central Palace, New York, N. Y., Dec. 1-6. News from exhibitors indicates a marked trend in the development of materials and units of all types designed to meet extremely difficult operating conditions. This would indicate that many industrialists are considering ventures into new fields where intensive requirements must be met.

OIL ORRIS ROOT LIQUID ABSOLUTE ORRIS CONCRETE ORRIS OLEORESIN (*Resinoid*)

Experience demonstrates that none of the substitutes for Orris are wholly satisfactory in giving the characteristic Orris note. It is therefore fortunate that these well known Bush specialties are now readily available.

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ALRO WATER SOFTENER A

STABLE IN SOLUTION

Recommended for clarifying liquid soaps and shampoos

This new organic sequestering agent:

1. Enhances foaming in soft water.
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4. Clarifies shampoos to which it is added.
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7. Does not cloud or precipitate even after long standing.

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American Society of Perfumers Adopts Constitution

A record attendance marked the September 15 meeting of the American Society of Perfumers at the Advertising Club when the proposed constitution was read by Secretary William Barlow, discussed and finally approved. Following the dinner President William Dunne Sr., called on Frazer Sinclair, guest of honor who ably discussed the service rendered by American perfumers during the trying days of the war. Messrs. Shelly and Marks of the company that bears their names explained the nature of their bottle business, and illustrated the talk with actual samples of rare bottles.

Those present were: Basil Pegushin, Schimmel & Co.; Jacques Masson, Ph. Chaleyer Inc.; Samuel Klein, Synfleur Scientific Laboratories; Oscar Bieser and Mr. Pressler, Naugatuck Aromatics Inc.; William Foley, Firmenich & Co.; R. B. Houk, Dodge & Olcott Inc.; William Dunne Sr., and William Dunne Jr., Ungerer & Co.; William H. Barlow, Orbis Products Corp.; George Tombak, E. I. du Pont de Nemours & Co.; Frank Spitaleri, Aromatic Products Inc.; Herbert Koenig, Dodge & Ol-



The directors and officers of Polak & Schwarz, affiliated houses from all over the world assembled in Zaandam, Holland, Sept. 5 for their first post-war conference. The main objective of the meeting was that of making the necessary decisions on raising the efficiency of the organization to, and beyond, its pre-war level. This was successfully achieved. In addition to commercial matters, the manner in which the company's forthcoming sixtieth anniversary should be celebrated was discussed

cott Inc.; George Zirkel, P. R. Dreyer Inc.; P. Bertin, Antoine Chiris Co.; V. di Giacomo, Givaudan-Delawanna Inc.; Paul Sanders, Polak & Schwarz; Joseph Balsam, Givaudan-Delawanna, Inc.; Fred Fielding, S. B. Penick & Co.; Bernard Polak, Polaks Frutal Works; H. P. Miller, Tombarel Products Corp.; George Mann, Norda Essential Oil & Chemical Co.; Dr. Julius Safrin, Gunning & Gun-

ning; Mr. White, van Ameringen Haebler Inc.; Dr. Berger, Felton Chemical Co.; Ernest Shiftan, van Ameringen-Haebler Inc. and William Fairhurst, Tombarel Products Corp.

Dr. Arthur Behr, director of research of the Aromatics Division of Dow Chemical Co., will speak on "Some Problems and Approaches to Aromatics Research" at the Oct. 15 meeting.



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DIRECT IMPORTS FROM SOURCE:

SELECTED FRENCH LAVENDER OILS

32/34% — 38/40% — 41/44%

Natural Ester Contents

Write for samples on your Letterhead

MUSK —CIVET — AMBERGRIS

DIRECT CONNECTION WITH THE BELGIAN CONGO SINCE 1893

"QUALITY MERCHANDISE GUARANTEED BY REPUTATION"

ESSENTIAL OILS AND AROMATIC PRODUCTS

*Our Selection
of the Month*



MOUNTAIN TOP

• A dashing unobtrusive odor refreshing as the outdoors for general purposes. (Trial pound \$6.50.)

THREE OTHER EXQUISITE
COMPOUNDS INCLUDE...

ROSE PETAL

SPICE PETAL

LAVENDER C

• **OTTO OF ROSE**... Dependably fine oil imported from Bulgaria for the better type perfumes.

• **Wire, 'phone or write**...

Try us for quality, price, delivery, service. In addition to being direct importers, we also compound various standard and special items. Try us!

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THE ELABORATE PRODUCTION AND LABORATORY CONTROLS WE HAVE SET UP AFTER YEARS OF PAINSTAKING EFFORT ARE REFLECTED IN A THIOGLYCOLATE OF UNSURPASSED QUALITY. THESE SAFEGUARDS GUARANTEE YOUR FINISHED SOLUTIONS TO BE WATER WHITE, CRYSTAL CLEAR AND FREE OF DAMAGING IMPURITIES AT ALL TIMES.

OUR NEW NON-IONIC EMULSIFIER "STANTOL" IS RECOMMENDED AS A CREAMING AGENT. IT IS THE MOST EFFECTIVE AND STABLE EMULSION FOR AMMONIUM THIOGLYCOLATE NOW AVAILABLE, AND IMPARTS A SNOW WHITE, CREAMY APPEARANCE TO COLD WAVE SOLUTIONS.

Write for details and samples.



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Dr. Lulek Becomes Ammonia Division Manager of Heyden Chemical

Dr. Ralph N. Lulek has been named manager of the Ammonia Division of the Heyden Chemical Corp., New York, N. Y. Dr. Lulek has been research manager of Heyden since 1946 and last Summer was in charge of the organization and rehabilitation of the \$60,000,000 Morgantown Ordnance Works used for the production of ammonia.



Ralph N. Lulek

Dr. Lulek is the holder of more than 50 patents in the field of dyes and intermediates and the inventor of several marketed dyestuffs.

H. J. Lehman Becomes Vice-President of TGA

H. J. Lehman has been elected vice-president of the Toilet Goods Association to succeed William M. Bristol, Jr. Mr. Bristol's resignation came about through a change in his duties with his company. Mr. Lehman has been a member of the Board

of Directors of the T. G. A. for several years. His vacant position on the Board has been filled by J. P. Hardie.

M. A. Strange Suffers Amputation

M. A. Strange, of Tucson, Arizona, has suffered a leg amputation. The injury started from a scratch which became ulcerated. It did not respond to treatment and an amputation became necessary.

Mary Brown Becomes President of Institute of Models

Mary Brown has been elected president and director of The Institute of Models, Inc., 11 West 42d St., New York, N. Y.



Mary Brown

els is Bryant 9-6857.

Miss Brown was previously affiliated with Primrose House, a subsidiary of the Barbasol Co., for sixteen years, as publicity and promotional director. The telephone number of Institute of Models is Bryant 9-6857.

Roy Huttleston Joins Schimmel

Schimmel & Co., Inc., New York, N. Y., has announced the appointment of Roy J. Huttleston, perfume chemist to its perfume laboratory, and at the same time, to its sales staff, where his specific assignment will be to provide technical advice and assistance to Schimmel customers.



Roy J. Huttleston

Mr. Huttleston comes to Schimmel from Cincinnati where he was perfume chemist with Procter & Gamble for many years.

Dr. A. Alexander Resigns from Carlova, Inc., Lander Co., Inc.

Dr. A. Alexander has resigned as vice-president and secretary of Carlova, Inc., Lander Co., Inc., New York, N. Y., St. Louis, Mo., and Binghamton, N. Y. He had been in charge of manufacturing and production for almost 24 years. His future plans have not been announced.

B-W LANOLIN U.S.P.

EVENTUALLY—For better creams, with economy

B-W Lanolin the superior quality puts into your cream that which gives the skin that smooth soft velvety feeling.

B-W Lanolin will never cause your cream to darken, is best by test and contains over 15% free and combined Cholesterol.

No other base used in your cream, equals the merits of B-W Lanolin.

B-W HYDROPHIL (Absorption Base) Made in U.S.A.

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**Executive Office
Laboratory and Factory**

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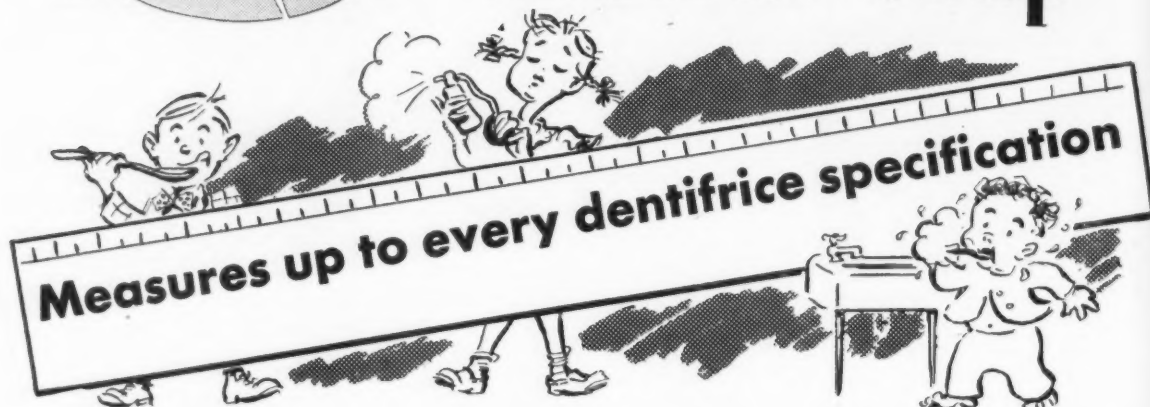
**America's Original Lanolin Producer
ESTABLISHED 1914**

**Sales Office
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NEW YORK, N. Y.



Neutral Soap



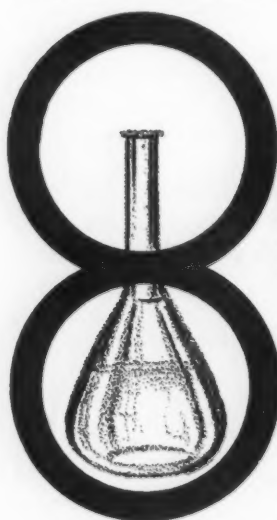
NO TASTE

NO ODOR

PLENTY OF FOAM

Modern production methods and close selling margins make it possible for you to buy standardized, air-floated POWCO BRAND Pulverized Neutral Soap to suit your needs of better quality at a saving. Write today for your generous sample stating the use for which intended.

John Powell & Co., Inc. • One Park Avenue, New York 16, N. Y.



Reasons Why **PLYMOUTH** **ZINC STEARATE U. S. P.** **IS BEST FOR DRUGS AND COSMETICS**

- 1 Backed by the longest commercial Stearate manufacturing experience in America . . . M. W. Parsons offer you this new product as the finest Zinc Stearate that can be made.
- 2 Years of research have made possible a particularly white product
3. Special production methods . . . developed over more than a quarter of a century . . . have made it **ODORLESS**
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5. It enables your face powder to retain the same odor that you give it.
6. A smooth, light, fluffy texture has been finally and **definitely** achieved.
- 7 Tested independently it shows the following results: **ARSENIC** (Gutzeit and Spectrographic Test) . . . Not Found. **LEAD** (Spectrographic Determination) . . . 1.7 parts per million.
8. The reputation and record of M. W. Parsons assure you of Uniformity in all shipments.

We also manufacture a superlative grade of **PLYMOUTH MAGNESIUM STEARATE**

M. W. PARSONS

Imports

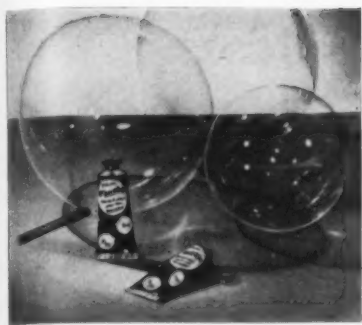
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"Bubaloon" liquid plastic balloons

Youngsters Balloon New England Collapsible Tube Sales

Liquid plastic balloons are currently creating a lot of fun for youngsters everywhere. The soft, clear plastic material is efficiently dispensed in small measured amounts on the end of a short section of rigid plastic tubing by a collapsible metal tube.

"Bubaloon" is packaged in New England Collapsible Tubes.

Naugatuck Aromatics Sole Agent Here for Bruno Court

We reprint herewith a letter received from Bruno Court S.A.: "We

have heard that our products have been offered to American consumers through channels other than Naugatuck Aromatics. We wish to state that Naugatuck Aromatics Division of the United States Rubber Co., 254 Fourth Ave., New York 10, N. Y. (with branches in Chicago and Los Angeles) are our sole distributors for our products in the United States and Canada, and anyone else offering our products does so without our knowledge and permission."

Perfume Counterfeit Ring Smashed

A perfume counterfeit ring, allegedly lead by Frederick G. Brissa, was smashed last month in South Bend, Ind., when he was arrested while making a delivery of spurious perfume.

The case was touched off when a sample of the perfume, purchased from a legitimate local source, was submitted to Chanel, Inc. Aaron I. Schwartz, attorney representing Chanel, went to South Bend to investigate the situation and discovered that sales in the amount of about \$10,000 had been consummated. Working with local police, a trail was uncovered that lead to Brissa.



How a chemical called Pentek improves paints was the subject of a paper read by T. M. O'Neil, of the Heyden Chemical Corp., New York, N. Y. The paper was read before members of the Pittsburgh Paint and Varnish Production Club during their Fall Meeting at the Fort Pitt Hotel, Sept. 8. Mr. O'Neil is shown above in his laboratory.

Anna Venice Joins Fritzsche Quarter Century Club

On Sept. 9, Miss Anna Venice became the newest member of Fritzsche Brothers' Quarter Century Club. At that time she was feted at a luncheon held in the New York Athletic Club.

Jean Niel, Inc. **Announce** **The Removal of their office** **On November 1, 1947**

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135 Fifth Avenue
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Importers of Floral Essences and Essential Oils

KOMMON/ SCENTS!

Poor Herbert Hoover. Both sides are giving him the greatest pasting since Hitler hung wall paper. (And confidentially, it sticks.)

His long-remembered critics insist, among other things, that Herbert's farm program was worse than Henry Wallace's. But history supports Hoover. No one did more for the apple business since William Tell.

Every adult knows the housing situation in Hoover's administration was better than today's. Any landlord will tell you there were plenty of empty apartments in 1931.

Even after the Wall Street crash there was great building going on. There must have been, else where would Prosperity have found so many Corners around which to hide?

Those were the unhurried days when Hoover was promising a chicken in every pot that nobody had left.

The sage of Palo Alto is the most misunderstood statesman of our times. It even took his successor nearly four terms to figure out what Herb had done in only one.

But calling those lean days "horrible" is a gross exaggeration. Ask the survivors.

Our eyes filled with tears recently when we saw a newspaper photograph of our only living ex-President. What courage! At least, what a gut.

How well the Cosmetic Industry remembers those good old days of Rugged Individualism:

Every Yale man an errand boy; every salesman a poor relative.

George Fiedler



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Private Label Manufacturers Exclusively
Covered by Product Liability Insurance

Natural and Aromatic Raw Materials Essential Oils

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Grasse • Paris • London • Beyrouth

Manufacturers of Quality Raw Materials
For Perfumery For Over 100 Years

MARKET REPORT

Shortage of Thymol Continues

DEMAND for certain compounds for perfumes has continued rather slow, but the general line of aromatic chemicals was moving into consuming channels at a faster pace and it is generally believed that as preparations get underway for the coming year-end holidays, the call for a great many raw materials will grow more pressing. Because of the downward trend in prices of chemicals and closely related articles very little buying for stock purposes is expected. Upset economic conditions both at home and abroad serve to create a feeling of caution among buyers in major consuming lines.

While the downward trend in prices of aromatic chemicals and essential oils has been rather sharp over a period of months it is quite possible that further slight recessions may be noted despite the marked gains that have been scored in the general list of other commodities in recent weeks.

SHORTAGE OF THYMOL

Contrary to expectations, the shortage of thymol is not likely to be relieved until early next year. One major producer is reported to be entirely booked up on its output to the end of this year explaining that it has sufficient raw material but its plant has been working to full capacity without being able to keep up with the demand. Another maker is facing the problem of obtaining sufficient meta-cresol to increase its output. There is more para-meta-cresol to be had but the raw material necessary in eliminating the para is being diverted to more essential uses.

Consumption of thymol has materially increased since the end of the war. The urgent use for this article which goes into the manufacture of proprietaries and pharmaceuticals has become worldwide. In some quarters it is said the export demand is equal to if not greater than domestic requirements. Prior to the war Germany was a major supplier of this article in the world market and many countries are now anxiously looking to the United States to supply them with material.

The continued shortage of meta-cresol is also affecting the supply of musk ambrette. A rather sharp advance in menthol was noted toward the close of last month. Some attributed the sudden upturn in prices to speculative influences pointing out that liberal arrivals from Brazil early this year were sufficient to meet consumers requirements over the coming Fall and Winter. The imports back in May and June were substantial and whether these goods are in the hands of dealers or consumers they should go a long way in taking care of this year's requirements.

A development of considerable interest was the an-

nouncement here by a major producer to the effect that its benzol price would be increased 2¢ a gallon. Should the advance become general prices, on a number of aromatic chemicals will undoubtedly go higher. Cost of alkalis will be higher over the final quarter of the year and the trend in certain other basic chemicals is definitely upward.

Following a rather severe break in oil spearmint, the market turned a shade firmer toward the close of last month on reports to the effect that the yield of new crop mint was not as satisfactory as some had expected. Department of Agriculture reported that prospects for mint oil in 1947 are about four per cent below the August 1 indications. Production of both spearmint and peppermint in six states placed at 2,034,000 pounds of oil is still 26 per cent above the 1946 production of 1,620,000 pounds and 63 per cent above the 1936-45 average of 1,245,000 pounds. Decontrol of sugar gave considerable support to the mint oil market and export inquiry was reported as brisk.

Among the seed and spice oils, coriander and dill weed displayed considerable strength. According to reports, supplies of coriander are very scarce here and abroad. Attempts to purchase dill weed abroad revealed that high transportation and other costs would lift the price of foreign oil to above the levels at which domestic material may be had.

DOWNWARD TREND IN LEMON OIL

Prices quoted by independent producers of California Lemon oil were well below those at which Exchange oil was selling. It is believed that lime oil has about reached the bottom on the recent downward trend in prices. The extended period of warm weather has enabled consumers to use up reserve stocks but it is not likely that any additional buying in any real volume will take place until December or January at which time manufacturers should begin to make preparations for next spring.

The improvement in essential oil sales was felt in some of the floral oils but the upturn was not sufficient to bring about any material strengthening in the general tone. Preparations on the part of perfumers and proprietary manufacturers for the year-end holidays should tend to encourage a heavier demand for some of the floral oils in the weeks ahead.

Citronella oils, both Ceylon and the Java type are obtainable at fairly attractive prices. The downward trend in prices has been reflected in the various derivatives including geraniol, citronellol, hydroxy citronellal and more favorable quotations for oil substitutes.



Jasmogee

All the subtle, true fragrance of Jasmin absolute is captured in Jasmogee—the finest simulation of the natural bouquet attained synthetically. Let this latest creation of our research laboratories convince you of its superlative quality by sending for a sample today.

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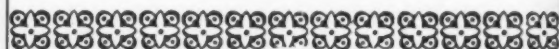
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*The Body and Lift
in Perfume*

Ph. CHALEYER, inc.

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another
"SHOPPER STOPPER"
by Braun



Elegance and a note of the bizarre! Braun's Oblong Crystal Perfume bottle (a stock design available in several sizes) and striking packaging are deftly blended by Sardeau.

W. BRAUN CO.

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347 FIFTH AVE. • NEW YORK 16, N. Y.

Fine

AROMATIC CHEMICALS

ESSENTIAL OILS

and

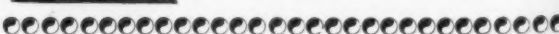
COMPOUNDS

Aromatics Division
GENERAL DRUG COMPANY

125 Barclay St., New York 7, N. Y.

9 S. Clinton Street, Chicago 6

1019 Elliott Street, W., Windsor, Ont.



PRICES IN THE NEW YORK MARKET

(Quotations on these pages are those made by local dealers, but are subject to revision without notice)

ESSENTIAL OILS

Almond Bit, per lb.	4.75@	4.90	Java	1.45@	2.00	Opopanax	30.00@	37.00
FPA	4.50@	5.25	Cloves, Zanzibar	1.40@	1.60	Orange, bitter	3.35@	3.75
Sweet True	.75@	.90	Coriander	25.00@	28.00	Brazilian	1.55@	2.00
Apricot Kernel	.65@	.85	Imitation	7.30@	8.85	Calif., exp.	1.75@	2.00
Amber, rectified	1.35@	1.50	Croton	4.75@	5.00	Orris Root, abs. (oz.)	135.00@	
Angelica Root	125.00@	180.00	Cumin	6.25@	6.75	Artificial	36.00	Nom'l
Anise, U. S. P.	.75@	1.00	Dillseed	6.50@	7.00	Pennyroyal, Amer	3.85@	3.95
Aspic (spike) Span.	1.75@	2.00	Erigeron	2.30@	2.50	European	4.00@	4.85
Avocado	1.10@	1.40	Eucalyptus	1.00@	1.50	Peppermint, natural	8.25@	8.50
Bay	1.20@	2.00	Fennel, Sweet	3.50@	4.20	Redistilled	8.75@	9.00
Bergamot	4.85@	5.50	Geranium, Rose, Algerian	15.50@	20.00	Petitgrain	3.25@	3.75
Artificial	3.65@	4.10	Bourbon	12.00@	14.50	Pimento Berry	5.00@	5.25
Birch, sweet	2.75@	5.00	Turkish	6.50@	8.25	Pinus Sylvestris	2.85@	4.00
Birchar, crude	1.25@	1.50	Ginjer	8.25@	8.90	Pumillanis	4.00@	4.50
Birchar, rectified	4.00@	4.10	Guaiac (Wood)	2.40@	2.60	Rose, Bulgaria (oz.)	40.00@	48.00
Bois de Rose	3.50@	4.35	Hemlock	2.40@	3.00	Synthetic, lb.	30.00@	35.00
Cade, U. S. P.	.70@	.90	Juniper Berry	6.00@	7.20	Rosemary, Spanish	1.35@	1.60
Cajeput	2.70@	3.00	Laurel leaf	20.00@	21.00	Sage, Spanish	2.40@	3.50
Calamus	20.00@	25.00	Lavender	2.35@	3.25	Sage, Dalmation	4.75@	5.00
Camphor "white" dom.	.55@	.65	Lavender, French	7.75@	10.00	Sandalwood, N. F.	14.75@	16.25
Cananga, native	7.00@	7.50	Lemon, Calif.	3.35@	3.50	Sassafras, artificial	.90@	1.00
Rectified	10.00@	11.25	Italian	4.35@	4.85	Ocotea Cymbarum	.90@	1.00
Caraway	5.65@	6.10	Lemongrass	1.40@	2.00	Snake root	19.00@	22.00
Cardamon	25.50@	26.00	Limes, distilled	4.85@	5.10	Spearmint	7.25@	8.60
Cassia, rectified, U. S. P.	3.00@	3.75	Expressed	10.00@	11.75	Thyme, red	2.85@	3.00
Imitation	2.10@	2.70	Linaloe	3.75@	4.00	White	3.00@	3.25
Cedar leaf	1.10@	1.25	Lovage	95.00	Nom'l	Valarian	32.00@	35.00
U. S. P.	2.25@	2.50	Marjoram	5.50@	6.10	Vetivert, Haitian	28.50@	32.00
Cedar wood	.65@	1.10	Neroli, Bigarde P.	350.00@	390.00	Bourbon	32.50@	35.00
Celery	16.00@	19.00	Petale, extra	265.00@	300.00	Wintergreen	4.25@	17.25
Chamomile Roman	250.00@		Nutmeg	5.75@	6.30	Wormseed	4.00@	5.15
Cinnamon bark oil	35.00@	42.00	Olibanum	10.00@	11.25	Ylang Ylang, Manila	40.00	Nom'l
Citronella, Ceylon	1.00@	1.35				Bourbon	14.50@	20.00

(Continued on page 397)

sunbleached beeswax

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Still using the same "old fashioned" methods proven successful for 95 years.

That's how long we've been bleaching beeswax since we first began operations in Holland in 1852.

Preference for high quality today is as strong as it was then.

That's why our customers would not think of letting us change production methods to gain "speed."

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U.S.P. Pure Sunbleached Beeswax • U.S.P. Pure Yellow Refined Beeswax
Ozokerite • Ceresine • Micro Crystalline Petroleum Waxes • Special Wax Blends

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L. I., N. Y.

KOSTER KEUNEN

Phone:
Sayville 400

CYCLONOL

CHARACTERISTIC ODOR and COOLING EFFECT OF MENTHOL

Cyclonol is chemically 1-methyl-3-dimethyl-cyclohexanol-(5). Graphically the structural formula is given in Fig. 1. It may be considered a lower homologue of symmetric or meta Menthol which has the structural formula shown in Fig. 2.

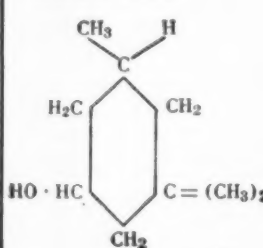


FIG. 1

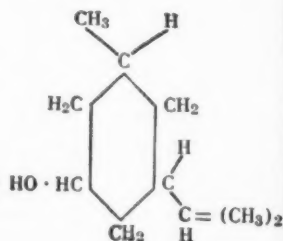


FIG. 2

Cyclonol replaces Menthol satisfactorily in shaving creams and lotions, liniments, analgesic balms, ointments and similar preparations. It has also been accepted by the U. S. Treasury Department as a Denaturant for alcohol in place of Menthol U.S.P.

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Factories & Warehouses

Los Angeles, Calif.

Nyack, N. Y.

(Continued from page 395)

TERPENELESS OILS

Bergamot	13.00@	16.00
Grapefruit	65.00	Nom'l
Lavender	19.00@	22.00
Lemon	35.00@	40.00
Lime, ex.	85.00@	100.00
Distilled	45.00@	48.00
Orange sweet	110.00@	135.00
Peppermint	14.00@	15.80
Petitgrain	7.25@	8.00
Spearmint	17.25@	20.00

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	1.90@	2.75
Acetophenone	1.65@	1.80
Alcohol C 8	4.25@	4.75
C 9	14.00@	
C 10	4.25@	4.50
C 11	14.50@	
C 12	4.25@	4.50
Aldehyde C 8	11.00@	12.00
C 9	19.00@	20.00
C 10	7.00@	8.50
C 11	22.00@	24.00
C 12	15.50@	17.00
C 14 (Peach so-called)	8.75@	9.50
C 16 (Strawberry so-called)	7.65@	8.25
Amyl Acetate	.55@	.75
Amyl Butyrate	.95@	1.10
Amyl Cinnamate	4.50@	5.80
Amyl Cinnamate Aldehyde	3.00@	3.85
Amyl Formate	1.00@	1.25
Amyl Phenyl Acetate	4.10@	4.85
Amyl Salicylate	.80@	.85
Amyl Valerinate	2.00@	2.25
Anethol	.65@	.75
Anisic Aldehyde	2.50@	2.85
Benzophenone	1.15@	1.30
Benzyl Acetate	.65@	.75
Benzyl Alcohol	.75@	1.00
Benzyl Benzoate	1.05@	1.20

Benzyl Butyrate	2.00@	2.25
Benzyl Cinnamate	3.75@	4.25
Benzyl Formate	2.25@	2.50
Benzyl-Iso-eugenol	9.00@	9.75
Benzyl Propionate	2.00@	2.15
Bornyl Acetate	2.25	Nom'l
Bromstyrol	5.75@	6.35
Butyl Acetate	1.91/2@	1.93/4
Cinnamic Alcohol	3.05@	3.50
Cinnamic Adlehyde	.90@	1.10
Cinnamyl Acetate	4.75@	5.50
Cinnamyl Butyrate	12.00@	14.00
Cinnamyl Formate	10.00@	13.00
Citral, C. P.	3.85@	4.00
Citronellal	4.00@	5.10
Citronellyl Acetate	7.10@	10.00
Coumarin	2.75@	2.90
Cuminic Aldehyde	7.75@	10.00
Diethylphthalate	.40@	.45
Dimethyl Anthranilate	4.55@	5.00
Ethyl Acetate	.35@	.40
Ethyl Anthranilate	5.50@	7.00
Ethyl Benzoate	.65@	.90
Ethyl Butyrate	.80@	.90
Ethyl Cinnamate	2.55@	3.00
Ethyl Formate	.65@	.75
Ethyl Propionate	.90@	1.00
Ethyl Salicylate	.90@	1.00
Ethyl Vanillin	6.75@	6.80
Eucalyptol	2.50@	3.25
Eugenol	2.35@	3.00
Geraniol, dom.	3.85@	4.20
Geranyl Acetate	4.80@	6.40
Geranyl Butyrate	7.00@	8.75
Geranyl Formate	7.00@	12.00
Heliotropin, dom.	3.00@	3.75
Hydrotropic Aldehyde	6.95@	7.50
Hydroxycitronellal	7.45@	10.00
Indol, C. P.	20.00@	23.00
Ionones		
Beta	6.50@	11.00
Methyl	5.50@	9.00

Iso-borneol	1.30@	1.50
Iso-butyl Acetate	1.05@	1.75
Iso-butyl Benzoate	1.35@	2.50
Iso-butyl Salicylate	2.35@	3.00
Iso-eugenol	3.10@	3.75
Iso-safrol	1.50@	2.00
Linalool	5.00@	6.10
Linalyl Acetate 90%	6.25@	7.25
75%	5.25@	6.00
Linalyl Anthranilate	15.00@	
Linalyl Benzoate	10.50@	
Linalyl Formate	13.00@	15.00
Menthhol	8.75@	9.40
Methyl Acetophenone	1.40@	1.80
Methyl Anthranilate	2.25@	2.40
Methyl Cellulose, f.o.b., ship-		
ping point	.60	Nom'l
Methyl Cinnamate	2.00@	2.50
Methyl Eugenol	4.00@	6.25
Methyl Heptenone	3.50	Nom'l
Methyl Heptene Carbonate	45.00@	60.00
Methyl Iso-eugenol	5.85@	10.00
Methyl Octene Carbonate	24.00@	30.00
Methyl Naphthyl Ketone	3.25@	3.40
Methyl Phenylacetate	2.50@	3.00
Methyl Salicylate	.42@	.45
Musk Ambrette	7.00@	7.75
Ketone	4.95@	5.50
Xylene	1.60@	2.00
Neroline (ethyl ether)	1.85@	2.25
Paracresyl Acetate	2.25@	2.80
Paracresyl Methyl Ether	2.60@	3.50
Paracresyl Phenyl-acetate	4.75@	5.25
Phenylacetaldehyde 50%	2.50@	2.65
100%	4.20@	4.75
Phenylacetic Acid	1.75@	2.25
Phenylethyl Acetate	2.40@	3.10
Phenylethyl Alcohol	2.10@	2.30
Phenylethyl Anthranilate	16.00@	

(Continued on page 399)

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HYAMINE 10-X is non-corrosive... safe to use on metal, plastics or rubber.

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(Continued from page 397)

Phenylethyl Butyrate	4.65@	5.00
Phenylethyl Propionate	3.90@	4.40
Phenylethyl Valerianate	7.50@	8.10
Phenylpropyl Acetate	5.50@	5.70
Safrol	1.15@	1.35
Scatol C. P. (oz.)	5.35@	6.00
Styrolol Acetate	2.50@	3.00
Vanillin (clove oil)	4.50@	4.65
(guaiacol)	3.00@	3.05
Lianin	3.00@	3.05
Yvetivert Acetate	70.00@	75.00
Violet Ketone Alpha	18.00	Nom'l
Beta	15.00	Nom'l
Methyl	6.50	Nom'l
Yara Yara (methyl ester)	1.85@	2.20

BEANS

Tonka Beans Surinam	.90@	1.00
Angostura	1.75@	1.80
Vanilla Beans		
Mexican, whole	9.75@	11.00
Mexican, cut	8.50@	8.25
Bourbon	7.75@	8.00
Tahiti	4.50@	5.00

SUNDRIES AND DRUGS

Acetone	.08 1/2@	.13 1/2
Ambergris, ounce	8.50@	18.00
Balsam, Copaiba	.70@	.90
Peru	.90@	1.10
Beeswax bleached, pure		
U. S. P.	.65@	.70
Yellow, refined	.58@	.63
Bismuth, subnitrate	2.15@	2.28
Borax, crystals, carlot ton	73.50@	76.00
Boric Acid, U. S. P., ton	129.00@	133.50
Calcium, phosphate	.08@	.08 3/4
Phosphate, tri-basic	.0635@	.0680

Camphor pwd., domestic	.72@	.74
Castoreum, natural	12.00@	13.00
Cetyl, Alcohol	2.25@	2.55
Chalk, precip. bags, cfts.	.02 7/8@	.03
Cherry Laurel Water, jug, gal.	2.10@	2.50
Citric Acid	.23@	.26
Civet, ounce	8.00@	22.00
Cocoa, Butter, bulk	.38@	.40
Cyclohexanol (Hexalin)	.21 1/2@	.22
Fuller's Earth, Mines ton	27.00@	30.00
Glycerin, C. P.	.29 1/4@	.29 1/2
Gum Arabic, white	.29@	.32
Amber	.15@	15 1/2
Powdered, U.S.P.	.19 1/2@	.21
Gum Benzoin, Siam	4.00@	4.50
Sumatra	.60@	.75
Gum Galbanum	1.00@	1.10
Gum Myrrh	.48@	.50
Henna, pwd.	.35@	.40
Kaolin	.05@	.07
Labdanum	5.00@	7.00
Lanolin, hydrous	.25@	.26
Anhydrous	.28@	.29
Magnesium, carbonate	.11@	.12 1/4
Stearate	.44@	.45
Musk, ounce	32.00@	55.00
Olibanum, tears	.26@	.35
Siftings	.12 1/2@	.14
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.24@	.35
Paraffin	.04@	.06
Peroxide (hydrogen) N.S.P.		
bbls.	1.10@	1.75
Petrolatum, white	.07 1/4@	.09 3/4
Quince Seed	1.65@	1.90
Rice Starch	Nominal	
Rose Leaves, red	3.45@	4.00
Rose Water, jug (6.6 gal.)	4.50@	6.00
Rosin, M. per cwt.	8.53@	
Salicylic Acid	.40@	.42

Saponin	1.75@	2.00
Silicate, 40°, drums, works,		
100 pounds	.95@	1.20
Soap, neutral, white	.20@	.25
Sodium Carb.		
58% light, 100 pounds	1.60@	2.70
Hydroxide, 76% solid, 100		
pounds	2.90@	3.75
Spermaceti	.43@	.48
Stearate Zinc U.S.P.	.43@	.44
Styrax	1.10@	1.60
Tartaric Acid	.50@	.50 1/2
Tragacanth, No. 1	3.50@	3.90
Triethanolamine	.19 1/2@	.20 1/2
Violet Flowers	2.00	Nom'l
Zinc Oxide, U. S. P. bbls.	12 3/4@	.14

OILS AND FATS

Castor No 1, tanks	26 1/2@	
Cocanut, Ceylon type,		
Atlantic ports, tanks	.15@	
Corn, crude, Midwest, mill,		
tanks	.22@	
Corn Oil, distilled, tanks	.25	Nom'l
Cotton, crude, tanks	.21 1/2@	
Grease, white	.17@	.18
Lard, Chicago	.22@	.23
Lard Oil, common, No. 1		
Chicago, bbls.	.23	Nom'l
Palm Niger, drums	Nominal	
Peanut, refined, drums	.24 1/2@	
Red Oil, distilled drums	.26 3/4@	.27 1/4
Stearic Acid		
Triple Pressed	.34 1/4@	
Double Pressed	.32@	
Tallow, acidless, drums,		
Chicago	.25	Nom'l
Tallow, N. Y. C., extra	17 3/4@	18 3/4
Whale oil, refined	Nominal	

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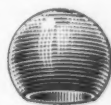
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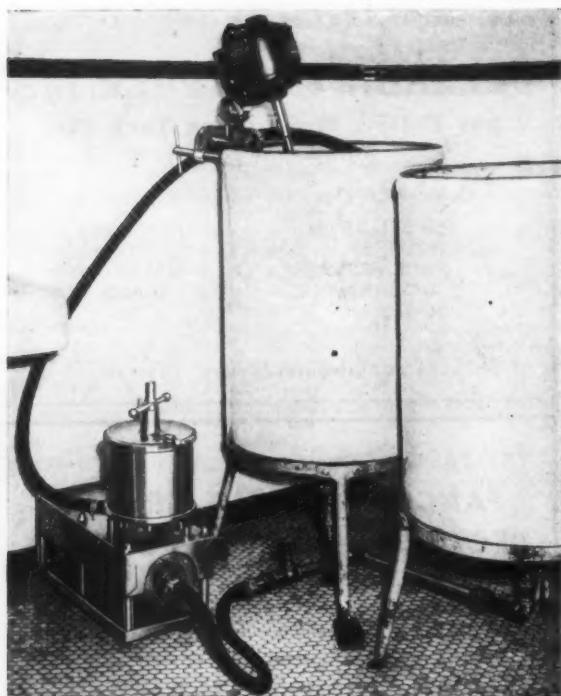
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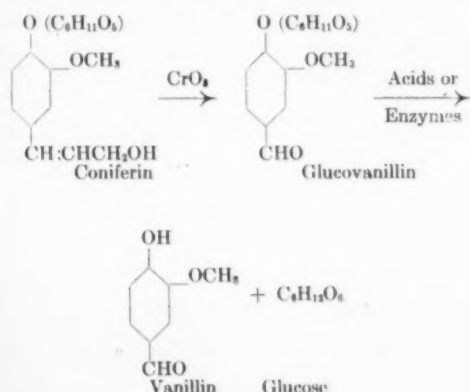
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Vanillin — Perfumery's

First Synthetic

New uses of vanillin developed during and after the war, coupled with an increased demand for **IRWIN A. PEARL*** vanilla flavor in ice cream and similar products has created a shortage

VANILLIN is the chief odoriferous principle of vanilla pods, the fruit of *Vanilla planifolia*. These pods have long been popular as a flavoring agent, and from them vanillin was first isolated in a pure state in 1858 by Gobley.¹ The extraction of vanillin from vanilla pods is a matter of comparatively little difficulty, but the small yields of 1.5 to 2.5 per cent made the cost of its commercial extraction almost prohibitive. In 1874 Tiemann and Haarmann² proved the structure of vanillin to be 4-hydroxy-3-methoxybenzaldehyde and artificially prepared it from coniferin, a glucoside occurring in the cambial sap of coniferous trees. Upon oxidation with chromic acid, coniferin yields glucovanillin which, in turn, is decomposed by acid or enzymes into vanillin and glucose.



SYNTHETIC VANILLIN

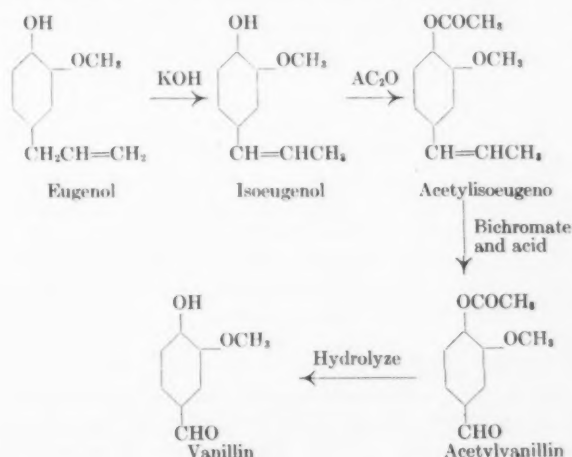
Synthetic vanillin was produced commercially in this manner in 1874 by Tiemann and Haarmann in their chemical factory at Holzminden, Germany. The difficulties in a seasonal collection of the cambial sap made this process very impractical, but this operation is of historical interest

* Institute of Paper Chemistry, Appleton, Wisconsin.

because it was the first instance of an artificial perfume manufacture.

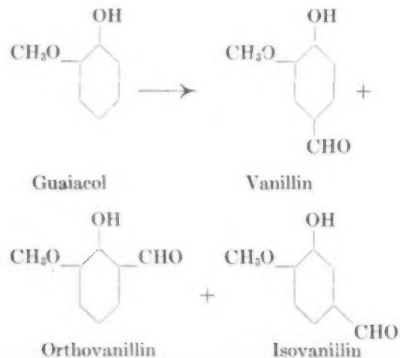
VANILLIN AND EUGENOL

A few years later Tiemann and Haarmann³ established the relation between vanillin and eugenol, a substance found to the extent of 70 to 90 per cent in the easily obtainable oil of cloves and cinnamon leaf oil. These investigators originally oxidized acetyleugenol with potassium permanganate and hydrolyzed the resulting acetylvanillin to vanillin. Further investigations revealed that much higher yields could be obtained by first treating eugenol with alkali to form isoeugenol, which was then acetylated, oxidized with acid and bichromate, and hydrolyzed.



This process with very little change was used for approximately 50 years for the production of most of the world's synthetic eugenol vanillin. The ozone process first described by Otto and Verley,⁴ in which isoeugenol was oxidized to vanillin directly without going through the

In addition to the syntheses of vanillin from natural products, syntheses of vanillin from coal tar are of great technical importance. These syntheses depend upon the introduction of the aldehyde group into the guaiacol molecule which is usually prepared from benzene. All these processes have a disadvantage not found in eugenol processes; orthovanillin and, under some conditions, isovanillin are formed to a certain extent together with vanillin, and the separation of these isomers presents an added problem.



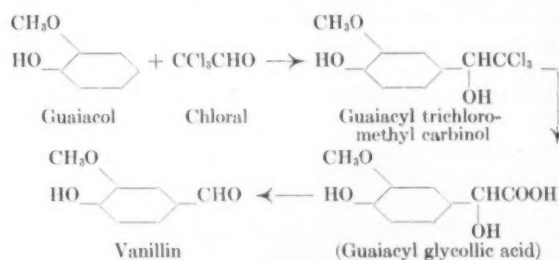
SYNTHESES FROM GUAIACOL

Of the many syntheses of vanillin from guaiacol reported in the literature, several have been used in large scale manufacture. The classical Reimer-Tiemann syntheses from guaiacol, chloroform and alkali⁸ and the Gatterman synthesis from guaiacol, hydrocyanic acid, and hydrogen chloride⁹ gave poor vanillin yields and were not practiced long commercially. The method of Sandmeyer¹⁰ is of technical interest. Guaiacol is treated with formaldehyde and then with an hydroxylamine or nitroso derivative such as

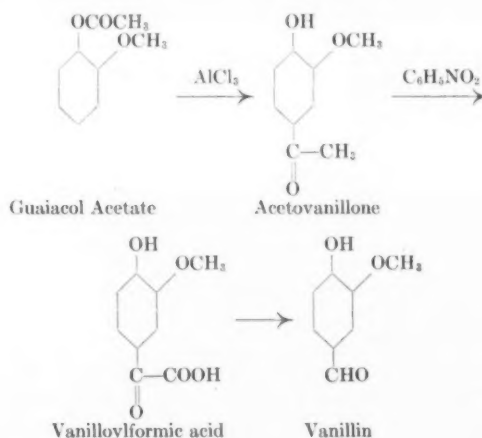
$$\begin{array}{c}
 \text{CH}_3\text{O} \\
 | \\
 \text{HO} - \text{C}_6\text{H}_4 \\
 \text{Guaiacol}
 \end{array}
 + \text{HCHO} + \text{HONH} - \text{C}_6\text{H}_4 - \text{SO}_3\text{H} \longrightarrow$$

$$\begin{array}{c}
 \text{CH}_3\text{O} \qquad \qquad \text{SO}_3\text{H} \\
 | \qquad \qquad \qquad | \\
 \text{HO} - \text{C}_6\text{H}_4 - \text{C}=\text{N} - \text{C}_6\text{H}_4 \\
 \downarrow \\
 \begin{array}{c}
 \text{CH}_3\text{O} \qquad \qquad \text{CHO} \\
 | \qquad \qquad \qquad | \\
 \text{HO} - \text{C}_6\text{H}_3 \\
 \text{Vanillin}
 \end{array}
 + \begin{array}{c}
 \text{SO}_3\text{H} \\
 | \\
 \text{H}_2\text{N} - \text{C}_6\text{H}_4 \\
 \text{Metanilic acid}
 \end{array}
 \end{array}$$

Another important technical process is that described by Spengler and Pfannenstiel,¹¹ in which guaiacol is condensed with chloral to give guaiacyl trichloromethyl carbinol, which is then oxidized and hydrolyzed to vanillin by means of a boiling copper acetate solution. A noteworthy technical improvement in which the guaiacyl trichloromethyl carbinol is oxidized by means of nitrobenzene in alkaline solution was disclosed by Mather and Hamer.¹²



The Fries rearrangement of guaiacol acetate to acetovanillone forms the basis of another important vanillin synthesis. The acetovanillone is oxidized with nitrobenzene and alkali to vanilloylformic acid which, in turn, is heated with dimethyl-*p*-toluidine to yield vanillin.



The American Perfumer

lated to the coniferin employed by Tiemann and Haarmann in their original vanillin synthesis in 1874. Wood, elaborated by the growing tree, comprises roughly fifty per cent of cellulose which exists in the form of fibers cemented together by a substance known as lignin; the remainder closely resembles cellulose but lacks a fibrous structure and is called hemicellulose. During the chemical pulping processes, the bulk of the non-cellulosic material of the wood is removed, leaving the original cellulose fibers in as pure a state as possible. One of the most widely used chemical pulping processes is the acid or sulfite process, in which the wood chips are digested with a solution of calcium bisulfite and sulfurous acid at elevated temperatures under pressure. During this process the lignin is dissolved as calcium lignosulfonate and the hemicelluloses are hydrolyzed to soluble carbohydrates and simple sugars. The effluent from this process, the so-called sulfite waste liquor, therefore, contains approximately one-half of the solids of the original wood, together with the chemicals used in the pulping operation. As the liquor leaves the digester, it contains approximately 10 per cent solids, of which about 50-60 per cent is calcium lignosulfonate and 25-30 per cent is carbohydrate material.

SULFITE PROCESS WASTE LIQUORS

Unlike the alkaline pulping processes, in which the cooking chemicals are recovered from the waste liquors by evaporation and burning, the sulfite process waste liquors must be disposed of by other means. Usually the sulfite waste liquor is run into the waterway upon which the mill is situated, and thus presents a pollution problem. In the United States alone, over one million tons of lignin are disposed of in this manner annually. The sulfite pulp industry has been aware of this problem for many years and has spent huge sums of money on research. As a result, the literature on the disposal and utilization of sulfite waste liquor is voluminous.

As early as 1898 Pollacksek¹³ oxidized sulfite waste liquor with air and ferric chloride and obtained small amounts of vanillin. A few years later, in 1904, Grafe¹⁴ produced vanillin in low yields by heating sulfite waste liquor with lime at 180 deg. C. Higher yields (5-10 per cent) were not obtained until 1928 when Kürschner¹⁵ heated sulfite waste liquor with alkali metal hydroxides under varied conditions. The alkaline reaction mixture was acidified to liberate the vanillin which was extracted with an immiscible solvent, such as ether. During the course of the following years many articles were published on modifications of Kürschner's process. However, the need for concentrating huge amounts of dilute liquors, the costly chemical consumption by the carbohydrate fraction of the sulfite waste liquor, and the technical and economic difficulties involved in the extraction of vanillin from the acidified reaction mixtures made the process commercially unfeasible.

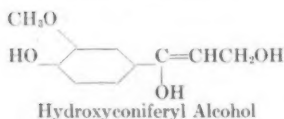
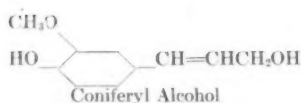
These difficulties were obviated by the Marathon-Howard processes.^{16, 17} In accordance with Howard,¹⁶ the dilute sulfite waste liquor is fractionally precipitated with caustic lime and the lignin is isolated as basic calcium lignosulfonate free from nonlignin materials. This carbohydrate-free lignosulfonate is next digested under pressure with a strong caustic soda solution, thus transforming a part (2-3 per cent) of the lignin to vanillin. The latter, as its sodium salt, is extracted directly from the alkaline

solution by means of butanol.¹⁷ The butanol extract containing the sodium salt of vanillin, together with minor amounts of the sodium salts of other phenolic materials, is distilled to recover the butanol. The final traces of butanol are removed by azeotropic distillation with water. The residual water solution of sodium salts is acidified with sulfur dioxide. This precipitates the undesirable phenolic bodies and leaves in solution the vanillin as its sodium bisulfite addition product. The filtered aqueous solution is further acidified with sulfuric acid and the sulfur dioxide is expelled. The crude vanillin which separates is filtered, and purified by high vacuum distillation, followed by recrystallization from water. The vanillin thus obtained is chemically pure, melting at 81-82 deg. C.

In 1937 The Salvo Chemical Corp. began the commercial manufacture of vanillin by the above process in their plant erected on the Marathon Paper Mills Co. property at Rothschild, Wisconsin. Before long they were supplying about two fifths of this country's vanillin requirements. The raw material available to the Salvo Chemical Corp. from the Marathon mill at Rothschild alone is sufficient to meet the present vanillin requirements of the entire world.

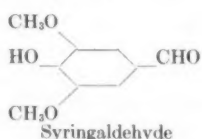
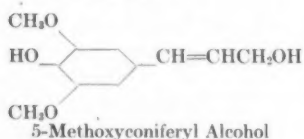
An entirely different process, developed by Hibbert and Tomlinson,¹⁸ was placed in operation at about the same time by Howard Smith Chemicals, Ltd., at the sulfite pulp mill at Cornwall, Ontario. In this process the sulfite waste liquor is first concentrated and then treated with caustic soda at an elevated temperature and pressure. The resultant solution is acidified by means of carbon dioxide (stack gases) and the solids removed. The clarified liquor is then extracted countercurrently with benzene, and the caustic in the vanillin-free liquor regenerated by incineration and causticization, with the incidental recovery of steam. The benzene solution is concentrated by evaporation, and the vanillin removed by means of sodium bisulfite. The purification steps are essentially those employed by Salvo. In addition to supplying most of Canada's vanillin requirements, Howard Smith Chemicals, Ltd., ships a certain amount to the United Kingdom.

Until 1940 it was a generally accepted fact among lignin chemists¹⁹ that only in the form of its sulfonate would lignin yield vanillin upon mild oxidative treatment. This was true in spite of the disclosure in 1928 by Pauly and Feuerstein²⁰ that vanillin was produced by mild oxidation of lignin in such materials as mosses, grasses, straw, esparto, hemp, flax, jute, ramie, wood, peat, lignite, brown coal, lyes containing lignin, and separated constituents such as phenol lignin or lignosulfonic acid. Oxidizing agents, such as ozone and acetic acid, chromic and acetic acids, and chromic and sulfanilic acids, were used. The earlier work of Pauly and Feuerstein took on new significance when Schulz²¹ and Freudenberg, Lautsch, and Engler²² demonstrated that all lignin-containing materials, including wood flour, yielded up to 25 per cent of vanillin upon oxidation with alkali and nitrobenzene under pressure. Not only was this discovery of technical importance for the production of vanillin, but it was also a valuable contribution to our scientific knowledge of the structure of lignin and strengthened the early hypothesis of Klason²³ that lignin was essentially a condensation polymer of coniferyl and hydroxyconiferyl alcohols. The nitrobenzene process is thus entirely analogous to that employed for the production of vanillin from the closely related isoeugenol.



Hibbert and co-workers²⁴ extended this process to hardwood lignin and Pearl and Lewis²⁵ studied the variables of this process at both atmospheric and superatmospheric pressures. Pearl²⁶ and Breneck and Müller²⁷ demonstrated that, in addition to nitrobenzene, other low potential oxidizing agents gave high yields of vanillin from sulfite waste liquor and other lignin materials.

At this point it should be mentioned that, whereas the lignin of coniferous woods is composed of only guaiacyl groups derived from coniferyl alcohol and the like, the lignin of hardwoods contains in addition to guaiacyl groups, syringyl groups derived from 5-methoxyconiferyl alcohol and its related compounds. Therefore, when hardwood lignins are subjected to the above described oxidation processes, syringaldehyde is formed in high yield together with the vanillin.



It is interesting to note that, since Tiemann and Haarmann first synthesized vanillin 70 years ago, the price of vanillin has dropped from \$768.00 per pound to today's comparatively low price of \$3.00 per pound.

USES OF VANILLIN

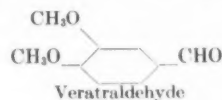
Besides its well known uses in perfumes and cosmetics and in flavorings of confections, beverages, ice creams, bake goods, and tobacco, many other uses for vanillin have been found. In a study of odoriferous materials, Bach²⁸ found that, of the many compounds tested, vanillin's odor threshold value of 0.0000002 mg./cu. meter of air was the lowest, and compared with 0.0000004 for skatole, 0.000005 for imitation musk (trinitrotertiarybutylxylene) and 0.00004 for ethyl mercaptan. Because of its tremendous odor-masking properties and because its odor is probably agreeable to more individuals than that of any other substance, vanillin has been added to the final rinse of several West Coast hospital and commercial laundry operations. Wellenkamp²⁹ reported several interesting uses developed by the army. It is reported that one day a G. I., disliking the taste of chlorinated water (purified on the spot with chlorine chemical tablets), dropped a vanillin tablet (it had been prepared in tablet form for use by the army) in the water to improve its taste. To his surprise, he found that the vanillin tablet not only neutralized the chlorine taste, but the chlorine likewise neutralized the vanillin taste, leaving the water tasteless as it should be. This resulted in an enormously increased use of vanillin by the army.

Another interesting use due to the extreme power of the product was its use as a deodorant for rubber. It was

found that the rubber housings of magnetos and other parts of airplanes gave off an unpleasant odor when subjected to heat at high altitudes. After trying many hundreds of substances it was found that incorporation of vanillin in the rubber overcame this objectionable odor and quantities of vanillin were used for this purpose.

Michael³⁰ masked the odor of castor oil by adding vanillin and Thiel³¹ found that the addition of vanillin and cane sugar improved the keeping qualities of compressed whole milk powder.

Vanillin has also been used to some extent in the manufacture of two other fine chemicals.²⁹ Veratraldehyde, the methyl ether of vanillin, is prepared by methylation of vanillin with dimethyl sulfate and alkali. This new perfume base has the aroma of heliotrope, caramel, and maple which immediately proved popular with manufacturers of face powders and toilet soaps. Vanillin was also used in considerable quantity during the war as the starting material for the synthesis of papaverine, a well known hypnotic and sedative originally isolated from opium.

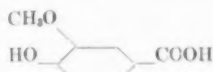


The nitrobenzene oxidation process of Schulz,²¹ giving high yields of vanillin from lignin materials, was made available to everyone in 1942 by the Alien Property Custodian, but in addition to wartime restrictions, two important factors prevented it from being placed into commercial operation. In the first place, the process yields as a by-product a quantity of nitrobenzene reduction products equal to (or greater than) the amount of vanillin produced. Thus, an economical operation would have to be associated with a concurrent process ending with aniline or related compounds. Secondly, the flavoring vanillin field was saturated by the existent production.

Realizing that a study of the chemistry of vanillin and its derivatives with the subsequent development of new chemical uses for vanillin would stimulate chemical industry and result in the wider utilization of waste lignin, such a project was initiated several years ago in the author's laboratory at The Institute of Paper Chemistry. This fundamental research program was sponsored by the Sulphite Pulp Manufacturers' Research League.

Although vanillin has been in large scale commercial production for years, the related vanillic acid has remained more or less a laboratory curiosity because of the lack of satisfactory process for the direct conversion of vanillin to the acid. This transformation was investigated and several practical methods have now been found. Quantitative oxidation of vanillin to vanillic acid was accomplished by means of alkali and one-half mole of silver oxide, a unique reaction in which one-half of the oxidation is performed by the alkali.³² Oxidations of vanillin have also been obtained with mercuric and auric oxides.³³ Probably the most important process from the industrial standpoint is the caustic fusion process,³⁴ which gives high yields of either vanillic or protocatechuic acid, depending upon the temperature. Fusion temperatures below 240 deg. C. yield only vanillic acid, whereas temperatures above 240 deg. cause demethylation and yield only protocatechuic acid. Active metallic silver was found to be a very effective

catalyst for the Cannizzarro reaction of vanillin and other phenolic aldehydes ordinarily resistant to this reaction.³⁵



Vanillic Acid



Protocatechuic Acid

Reaction of vanillin with alkali in the presence of silver catalyst gives equivalent amounts of vanillic acid and vanillyl alcohol (in a polycondensed form). When the same reaction is carried out in the presence of excess formaldehyde, unpolymerized vanillyl alcohol is the only product.



Vanillyl Alcohol

Vanillic acid esters are easily prepared in good yield from vanillic acid and the appropriate alcohol by ordinary methods. These esters have proved to be very effective as preservatives for such foodstuffs as salt fish, fresh fruit and vegetable juices, cheese spreads, etc.³⁶ Comprehensive toxicity studies of ethyl vanillate have indicated that it is less toxic than sodium benzoate when administered in aqueous suspension and that it has approximately the same toxicity as sodium benzoate when administered in oil. During the past war the United States Food and Drug Administration agreed to consider the use of ethyl vanillate in amounts up to 0.10 per cent where it could be demonstrated that such use would permit the delivery of acceptable food products to the armed forces.

In addition to preservative properties a number of the vanillic acid esters possess spicy odors which might prove valuable in the perfume and cosmetic industries.

Numerous other developments in the field of vanillin utilization have been made and will be published in the near future.

Thus, the status of vanillin has changed during the past several years. New uses developed during and after the war, coupled with the greatly increased demand for vanilla flavor in ice cream and similar products, has created a vanillin shortage. At present producers of vanillin are unable to meet current demands, and the bulk of production is sold for many months in advance. These conditions can only lead to expansion of production facilities, and we can expect new commercial developments in the fields of vanillin and lignin chemistry in the very near future.

- ¹ Goble, *Jahresber.* 1858, 534.
- ² Tiemann and Haarmann, *Ber.* 7, 613 (1874).
- ³ Tiemann and Haarmann, *Ber.* 9, 52 (1876).
- ⁴ Tiemann and Haarmann, *Ber.* 10, 1907 (1877).
- ⁵ Otto and Verley, German Patent 97, 620 (April 20, 1895).
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